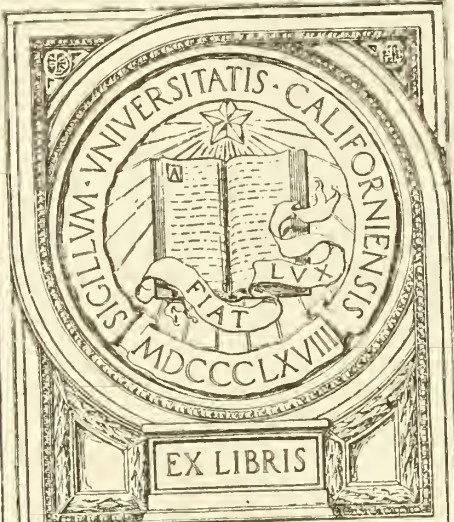




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## CARDIOLOGY FROM THE GENERAL PRACTITIONER'S STANDPOINT.

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So rapid have been the advances in our knowledge of diseases of the cardiovascular system in recent years, that unless one can devote practically his whole time to the study of this branch of medicine it is impossible to keep up with them.

Cardiovascular disease stands at the head of the list of causes of death in this country and so constitutes one of the most important problems in Internal Medicine. How best to boil down the vast accumulation of facts that are being gathered in this field, as well as in the other fields of medicine, and to present them to the general practitioner in such a way that he can use them to advantage is and always has been a very serious problem. Yet, unless this can be done the general public will never benefit by the knowledge and experience that is being accumulated by the comparatively few investigators and specialists. For, after all, the general practitioner is the man upon whom we must ultimately depend to bring the benefits of preventive or curative medicine directly to the people at large. Tuberculosis is, for example, one disease that has been brought under a very fair degree of control by such proper educational methods.

The introduction of instrumental methods in the study of heart disorders naturally made the situation more complicated and the new technical vocabulary which has nec-

essarily grown up about these methods of study has added to the confusion. What is the value and place of these instruments?

The blood pressure apparatus is now familiar to practically everyone and even the laity talk quite glibly of their pressures. The mercury instrument is more accurate but the aneroid is easier to carry and is also an aid in diagnosing arrhythmias. When McKenzie perfected his polygraph he laid the foundation for the first clear comprehension of the arrhythmias and of heart block. If an electrocardiograph is available, there is little use for a polygraph at the present time. The action of the polygraph depends upon mechanical transmission of the movements of the radial artery and jugular vein to movable pens which record these movements upon a strip of paper. Synchronously, a time record is inscribed on the paper by another pen moved by clock work. Irregularities of rhythm are shown by this instrument and since the movements of the jugular vein correspond with auricular filling and emptying, and those of the radial with similar ventricular movements, it is possible to demonstrate auriculoventricular heart block by detecting the fact that the ventricles are beating slower than the auricles or that there is a longer interval between auricular and ventricular contraction than normal, as in partial block or delayed conduction.

Einthoven's contribution, in adapting the string galvanometer to detection of the action currents of the heart muscle and conduction system, was of tremendous value, and the electrocardiograph is today essential to any careful cardiovascular examina-

tion. The nature of this instrument, its action and method of use, the methods of interpreting the records I have described in a previous paper to this society and I shall now briefly outline the conditions which it will reveal. The arrhythmias are shown definitely and much more clearly than by the polygraph. Varying degrees of abnormal conduction within the heart both in the Bundle of His and its two main branches and also in the Purkinje system are clearly shown. Myocardial changes of severe nature frequently give definite alteration in the electrocardiogram and it is possible to demonstrate improvement in the heart muscle under treatment, at times, by this instrument. It is of a great deal of value in confirming the diagnosis of coronary thrombosis. Hypertrophy of one or the other side of the heart in general gives typical electrocardiographic changes.

The vital capacity spirometer, which measures the vital capacity of the lungs, is thought by many to furnish a very fair estimate of the functional capacity of the heart expressed numerically. The other tests of functional capacity, such as the use of blood pressure, or pulse rate after given exercises, also have their adherents.

The x-ray is of value in cardiology and with its use you all are familiar.

A basal metabolimeter is frequently useful in differentiating between the possibility of a cardiac arrhythmia due to hyperthyroidism and that due to some essential disease of the heart. The differential diagnosis between neurocirculatory asthenia, or autonomic imbalance, and hyperthyroidism is a fairly frequent problem and a basal metabolism is of considerable help as it is not elevated in autonomic imbalance, but is elevated in hyperthyroidism.

This array of instruments, some of them requiring highly technical knowledge for operation, and interpretation of the records obtained by them make the study of heart disease seem pretty formidable. Now, while these things all have their sphere of usefulness and while our present advanced state of knowledge of cardiology depends to a considerable degree upon what they have shown, and while

one pretending to do special work in cardiology could not do without most of them, yet it seems to me to be well to recall to your minds some of the simpler things that will still give you a considerable insight into the problems of the patient with circulatory disorder or disease.

The first of these things is a careful history, and all this requires is time and tact and a knowledge of what to ask the patient. Shortness of breath, palpitation, sensation of irregular heart action and precordial or substernal pain are the most common symptoms of which a patient suffering from cardiac disorder complains.

One must be careful to analyze the patient's statement that he suffers with shortness of breath. In nervous individuals a sensation of not being able to take a deep breath is often called shortness of breath and may prove misleading. It is important to question the patient as to the amount of exertion necessary to bring on shortness of breath and a good measure is his ability to climb one or more flights of stairs. It seems to be much more satisfactory to estimate a patient's ability to do the things that he is accustomed to do rather than by some unusual test such as swinging dumbbells. An individual who cannot go up one flight without shortness of breath has fairly serious impairment of circulatory function. The patient who cannot lie flat in bed without difficulty in breathing probably has considerable cardiac disease and one who is awakened out of a sound sleep by dyspnea usually has pretty serious heart disease. Few persons with serious damage to the heart escape some degree of dyspnea.

Palpitation includes various forms of rapid heart action in which the patient is conscious of a throbbing sensation over the heart. Questioning on this point will help differentiate between palpitation with regular and that with irregular rhythm. If the patient complains of an occasional pounding beat, a turning over of the heart or a missed beat followed by a heavy beat, we can be reasonably sure that we are dealing with premature beats. Frequently, the patient can tell that his heart seems to be totally irregular, which suggests fibrillation



of the auricles. In paroxysmal tachycardia the sudden onset of a very rapid, regular rhythm and the abrupt ending of the attack are almost certainly diagnostic. A complaint of rapid beating or of irregularity suggesting auricular fibrillation should always lead one to ask concerning the symptoms of hyperthyroidism, which is not uncommonly the exciting cause of auricular fibrillation.

There are various types of heart pain and where they occur in a person over 35 or 40 years of age they should be investigated seriously. The location and possible radiation of pain should be enquired into, but of more importance, I think, is the character of the pain, or distress, and the occasion of its occurrence. The discomfort that is described as a sensation of squeezing or of pressure under the breast bone, even if not severe and unaccompanied by pain, is, I believe, of just as serious significance, as real pain. Usually it is accompanied by some degree of difficulty in breathing, but not always. I have seen one patient die with only this sense of substernal pressure. Radiation of the distress does not always occur although it may be felt in the neck and under the angle of the jaw.

These pains or other sensations may follow physical or mental exertion, or may come on while the patient is quiet, perhaps sleeping, and under the latter circumstance they are of extremely serious significance. Usually they are associated with grave myocardial disease and probably coronary sclerosis. It is very important that one be not misled by the fact that the pain is not severe or that there is no acceleration of the pulse in the attack or that the blood pressure is not elevated during the attack. Question the patient closely as to these points and you will often be able to make a diagnosis in time to be of considerable service to him.

One should not only take a careful history of the onset, development and course of the condition of which the patient complains, but also should investigate the past history equally carefully. Rheumatism, chorea, growing pains and frequent sore

throats are the commonest etiologic factors in the cardiac disease of young people and should be systematically enquired into. Syphilis should always be asked about in older patients.

The habits of the patient, his attitude toward his troubles and life in general, his method of doing his work, either taking it very seriously or lightly, can all be got from talking with him, and the estimate that it is possible to make of his condition from the history alone will frequently go far toward making a diagnosis. For instance, a young woman who complains of shortness of breath but can go up 2 flights of stairs without discomfort and can dance all evening without special discomfort, together with absence of a history of the above mentioned acute infections, at once makes one suspect that she has no real cardiac disease. If, however, her statement that she suffered with shortness of breath were not analyzed it might be very misleading and especially so if a loud, somewhat drawn out slapping first sound were heard at the apex due to an over acting heart in a nervous individual. This sort of a case frequently is diagnosed as mitral stenosis, but is much more apt to be one of autonomic imbalance or hyperthyroidism. Dr. Thomas Lewis once said that any person who had a normal capacity for work could not have serious heart disease.

As to examination: Note the manner in which the patient tells his story. The person with real heart disease seldom exaggerates his symptoms, while the one with neurocirculatory asthenia or the nervous individual with some unimportant disorder, such as premature contractions, is apt to tell an obviously exaggerated story. Examine the whole patient and one will sometimes find the cardiac pain to be due to a chronic cholecystitis; the auricular fibrillation to hyperthyroidism; the irregular heart of the extrasystolic type to gastrointestinal disturbance or tobacco; the shortness of breath to some pulmonary condition, such as tuberculosis or emphysema.

Thyroid disorder should be looked for in every patient and foci of infection about the nose and accessory sinuses, tonsils and teeth should always be sought for carefully.

In the examination of the heart itself the arrhythmias seems to cause considerable confusion, but if one studies them and gets a mental picture of what is happening in the heart in each type of arrhythmia one can diagnose them in very many cases without complicated instrumental help.

The commonest irregularities of rhythm are premature contractions, erroneously called extrasystoles, auricular fibrillation, auricular flutter and paroxysmal tachycardia. The premature contraction is one that occurs earlier in the cardiac cycle than normal, that is, a very short time after the preceding normal contraction. The diastolic period separating the previous normal contraction and the premature contraction is much shorter than normal and as a result the heart muscle does not recover sufficiently to contract with its usual vigor and the contraction is a weak one. For this reason the impulse from the premature contraction is frequently not felt in the radial artery. The premature contraction having replaced a normal one the heart is unable to contract again until time for the next succeeding normal contraction and as a result a long diastolic pause occurs. Now, if the premature beat has not been felt at the wrist there will appear to have been a missed beat, and the patient often feels that a beat has been missed. The normal contraction following the long diastole is stronger than usual and the patient feels it as a pound or thump. If one listens over the heart, the premature beat can usually be heard and, better still, if one applies a blood pressure apparatus in the usual manner and with the cuff inflated to systolic pressure or a little below, the swing of the needle will give a very clear representation of the cardiac rhythm and the premature beat; and the compensatory pause with the stronger beat at the end of this pause can be clearly seen. The aneroid type of instrument is the best for this use, because of the greater oscillation of the needle than of the mercury column in the mercury type, and it will be found very helpful in differentiating and visualizing arrhythmias. These premature contractions may be isolated or may recur at frequent

intervals, but can usually be recognized and it is important to identify them because in most instances, especially in young people, they do not indicate serious heart disease. If not correctly diagnosed they worry both the patient and the physician.

Auricular fibrillation is a complete arrhythmia and if the physician again will watch the needle of the blood pressure apparatus he will notice first that it is difficult or impossible to get a systolic reading because of the varying force of the beats, many weak beats not being heard over the brachial artery nor causing movements of the pointer. As the pressure in the cuff is reduced, the movements of the needle become more frequent, due to the fact that weaker beats are getting through the artery, and the oscillations are seen to follow no regular rhythm. This rhythm is usually seen in a patient in whom other evidences of heart disease can be found and is very frequently associated with heart failure of some degree, except in the case of old people in whom it often causes no inconvenience. Digitalis will in most cases give considerable relief to patients with this disorder while in the case of the premature contractions it may increase the difficulty.

Auricular flutter and paroxysmal tachycardia are both regular in rhythm. Flutter most often occurs in a person in whom there is some definite heart trouble, and is related to auricular fibrillation, while the person developing paroxysmal tachycardia most frequently has no other evidence of heart disease. In flutter the ventricular rate is usually half or one quarter that of the auricles. The auricular rate is from 250 to 350 per minute. Therefore, a regular rapid rhythm, with a rate as counted by stethoscope of 180 or 190, would certainly rule out flutter because multiplying this rate by 2 would give an auricular rate of over 350, and paroxysmal tachycardia would be the probable diagnosis. The rate in paroxysmal tachycardia may be in the neighborhood of 130 or 140 when this point alone would not differentiate it from flutter, but its other characteristics would be sufficient to make the condition clear. The rate in



paroxysmal tachycardia is remarkably constant, varying not more than 1 or 2 beats per minute when counted at varying intervals. Paroxysmal tachycardia begins abruptly, the patient being conscious of the moment of onset, and ends just as abruptly, and the ventricular rate when multiplied by 2 is apt to exceed 350. Pressure on the vagus nerve neck, or on the eyeball, will stop most attacks of paroxysmal tachycardia, but will do no more than slow auricular flutter. This differentiation between flutter and paroxysmal tachycardia is important since the treatment is entirely different, as is also the prognosis. Digitalis is the treatment for flutter while vagus or ocular pressure as stated above in the differential diagnosis is all that is necessary to stop most attacks of paroxysmal tachycardia.

These irregularities are of interest to the surgeon as well as the general physician because they not infrequently occur during or following operation.

The blood pressure apparatus is also valuable in detecting pulsus alternans, in which, as the pressure in the cuff is released, only every other beat is heard at first and not until the pressure is reduced below the systolic point does every beat come through. This sign is associated with severe myocardial weakness.

As to auscultation, it is important to learn to use the unaided ear. There are a considerable number of soft blowing diastolic aortic murmurs that are heard easily by the ear alone and not with a stethoscope. Mitral diastolic murmurs are frequently heard only with the patient lying on his left side and often only for a few moments after exercise. Examine all cases suspected of having heart disease in the recumbent and left lateral postures, and stooping forward in the standing posture, and if possible after exercise.

It is possible to make a correct diagnosis in a very large percentage of heart cases without complicated apparatus, if one gets a clear idea of what the possibilities in diagnosis are and a mental picture of what normally occurs in the cardiac cycle and what occurs in the abnormalities. The only instruments absolutely essential are a well

trained ear, a good and very simple bell stethoscope, a blood pressure apparatus and a couch or table.

#### DISCUSSION.

**Dr. Reik:** One statement made by the speaker with such emphasis, that he apparently intended it to have a specific meaning, seems to me to require either explanation or some qualification. If I understand him correctly, he said that the removal of tonsils does not preclude the possibility of a future attack of cardiac trouble or of arthritis. I don't wish to precipitate a discussion on the removal of tonsils, but it seems to me that such a statement requires some explanation or it might be misunderstood by those of us engaged in the general practice of medicine. Those who advocate the removal of infected tonsils as the probable cause of cardiac disease, or of arthritis, certainly would not for a moment say that the individual who has undergone tonsillectomy may not at some future time have an attack of endocarditis or arthritis due to some other cause, but such an operation does preclude the possibility of another attack of endocarditis or arthritis from diseased tonsils.

**Dr. Samuel Stalberg:** I came in a little late and I don't know whether the reader of the paper mentioned it or not, but one method which I came to rely upon a great deal, not so much for the diagnosis of the various cardiac conditions as for the potency of the cardiac muscle itself, is the plan that was evolved mainly during the late war by Thomas Lewis and others, and that is the giving of a certain definite form of exercise to test the functional capacity of the heart muscle. Of course, like other methods, it is not absolutely infallible, but almost invariably I found that the other circumstances in the case and the later history justified that reliance. You are repaid many times in the performance of this test.

You take the patient in 3 different postures, in the recumbent, in the sitting posture, and in the standing posture, and note the differences in the rate of the pulse, and then you make him perform a certain definite form of physical exercise. I usually employ hopping on the left foot 100 times. Then you get him back in the recumbent posture and count his pulse. In the normal case there will be a certain increase in the pulse rate. This goes back, in almost every normal case, within 2 minutes. In some cases it goes back a little bit earlier. In cases that have a deficient cardiac muscle or some degree of myocardial deficiency, you will find almost invariably the rate does not go back in 2 minutes, and the time in which the rate goes back varies with the deficiency of the cardiac muscles. In some cases it does not go back until 4 or 5 minutes.

I think this simple method is very valuable in the estimation of cardiac disease.

**Dr. Ewing:** About the removal of tonsils, I just mentioned that in passing. I know I have seen cases of endocarditis occurring after thorough removal of the tonsils, apparently from the same type of infection in the glandular tissue in the pharynx. When you have removed the tonsils in a young patient, he is protected to the extent that you have removed the commonest source of the infection that causes heart disease in young people.

As to the tests of functional capacity, I have tried them all. I have found none that are satisfactory. Vital capacity, Barringer's swinging of

dumb-bells and followin. blood pressure afterward, hopping on one foot, changing posture and all the rest of them have not proved satisfactory in my hands. I get much more information by asking the patient what he can do in his ordinary daily life. There are no 2 patients who will hop up and down exactly alike; there are no 2 patients who do the same amount of work on hopping up and down, and it is an abnormal thing for a person to do. A nervous individual will get the idea that it is something very important or else, in the neurocirculatory case, he will hop high for a while and gradually lower and lower so that it is impossible to keep that exercise constant. It, therefore, becomes of very doubtful value as an accurate method of measuring the cardiac reserve. The same thing applies to swinging dumb-bells; most of us are not accustomed to swinging dumb-bells. If you ask a patient to swing a 10 or 12 lb. dumb-bell up above his head, if he is an athlete, he will do it very readily. If it is a woman who has never been an athlete, she will do a great deal of work in swinging that dumb-bell; and again you are not going to get anything very definite out of the same piece of work in different individuals. I have been very anxious to get a functional estimate of the capacity of the heart, but I don't know of anything better than asking the patient as to the ordinary things that he does in his everyday life. Again, in all these things, hopping up and down on one foot, swinging dumb-bells, and then taking the blood pressure, you are dealing with more than one factor, you are dealing with several factors, aside from the factor of the heart muscle, and what you are getting is not an estimate of the heart muscle's functional capacity alone, but an estimate of the patient's general ability to do work.

So that I do these things, I take these tests and I have a spirometer, but I have never been able to find a single case in which I got any better estimate of a patient's functional capacity by one of these so-called accurate tests than I could get by carefully talking to him for 15 to 30 minutes or using some simple test such as walking upstairs.

## SURGERY OF THE LARYNX.

HENRY BOYLAN ORTON, M.D.,

The Larynx, in many ways, is like No Man's Land, a little too low for the average nose and throat man, a little too high for the internist, and seemingly of no importance to the general surgeon.

Chronic stenosis of the larynx usually comes to the surgeon in either a tracheotomized or an intubated case. The types of stenosis which we encounter are classified as follows: Panic, spasmodic, paralytic, ankylotic, neoplastic, hyperlastic and cicatricial. The cases reported this afternoon are included in the above types; the hyperlastic is the most common form, diphtheria being the cause in 17 cases.

The first type, panic stenosis, has the psychic element for the predominating cause and that quite naturally becomes a very important factor in the treatment. Spasmodic and ankylotic types I will pass over by simply mentioning them, coming next to the neoplastic, which includes both the benign and malignant growth. Papillomas and fibromas are usually removed without any trouble by direct laryngoscopy, though in some cases it is necessary to put the larynx at rest by tracheotomy. Malignant forms vary in degree; epithelioma is, of course, the most common, while carcinoma and endothelioma rare.

Endolaryngeal operating is rather disappointing. In early cases, with the growth limited to the anterior third of the cord, a laryngofissure or thyrotomy with extirpation of a wide area will, according to the statistics of St. Clair Thompson, Jackson and others, produce cure in 85% of cases. The following case histories are of interest:

E. Z., aged 48, female, white, was referred to me October 20, 1919, with dryness of throat, accompanied with hoarseness.

*Hereditary History:* Mother died of stomach trouble at the age of 56. Father died of asthma at the age of 57. Husband died from accident. Two children living and well. Has never had a miscarriage. No previous history of tuberculosis or cancer in the family.

*Antecedent Personal History:* Had measles and whooping cough when a child. Otherwise has enjoyed good health up to the present trouble. Patient went to a local hospital for one year, being treated for chronic laryngitis. For the past year has been treated by various doctors without relief.

*Present History:* When talking any length of time voice tires. Very seldom coughs. Has very little pain. When patient feels pain it radiates from neck to left ear. Headaches occasionally. Some days does not trouble her at all. Appetite good. Sleeps well. No pain on swallowing. No shortness of breath. Gaining weight.

*Physical Examination:* Eyes, corrected with glasses. Head, negative. Ears, negative other than slight pain at times radiating to left ear. Nose, slight deviation of the septum to the right, in contact with the middle



turbinate. Mouth, negative. Neck, negative. Throat, dry. Notwithstanding the fact that tonsils had been operated upon, part of them still remain. Indirect laryngeal examination showed a warty, grayish white growth on the anterior part of the left cord, with a sluggish movement. Lungs, complete chest examination by Dr. George B. Emory revealed no evidence of tuberculosis and he thinks the lungs are normal. Heart, negative. Abdomen, negative. Extremities, negative. Wassermann, negative. Sputum, negative. X-rays, negative.

*Diagnosis:* Epithelioma of the left cord.

*Laryngoscopy:* October 27, 1919. Conditions found on first endoscopy: Growth is subglottic as well as being on the cords. Arytenoids not involved. Small piece of growth removed. Microscopic examination of specimen, by Dr. John W. Gray: "The mass consists of finger-like papillomatous arrangement of squamous epithelium, which is closely packed together and in center of growth invading deep tissues. The basal lining is, however, quite regular. In numerous places the cells show very active mitosis with the production of tumor mitoses; in a few places definite early pearl formations. *Diagnosis:* Epithelioma of the left vocal cord."

A laryngofissure was done on November 8, 1919, at the Presbyterian Hospital. A median incision was made, extending from the hyoid bone to the suprasternal notch. Dissecting down to isthmus of the thyroid gland which was clamped, cut and ligated. A low tracheotomy was performed. Thyroid cartilage was split in the median line. Perichondrium separated from the internal surface of the left thyroid cartilage as far back as the arytenoids. The growth was removed, by cutting  $\frac{1}{4}$  in. above and below the margin of the growth, along with the arytenoids on the left side. A piece of cartilage 3 x 6 mm. was removed at the junction with the cricothyroid membrane in the median line. Larynx packed with gauze, neck sutured, patient put to bed in sitting position.

The operation and subsequent treatment were uneventful, other than that a large amount of granular tissue formed within the larynx where the cartilage was resected. This was removed and the patient has remained entire-

ly well with a good voice up to the present time, a period of nearly 6 years without recurrence.

In cases in which the growth appears to be larger and involving the posterior part of the cords, the outcome is not so good with laryngofissure. In these cases a complete laryngectomy should be done, provided the growth has not jumped the fence, which is very hard to determine, for even by direct examination what from all appearances looks to be an intrinsic growth has many times already become extrinsic, and usually, only too sad to relate, if operated on there will be a recurrence within a year.

T. H. N., aged 53, was referred to me on September 29, 1920, complaining of a sore throat which had existed for 11 weeks. I saw the patient in consultation with Dr. Mackenty who agreed with me in the diagnosis and advised as follows: "The disease is on the border line between operation and nonoperation, since it is practically an extrinsic case. Yet I believe there is some hope of still circumventing it by operation. I would certainly not delay the operation for it will soon be too late to save him." Laryngectomy was done in August, 1921, and the patient died of a recurrence on December 4. There was an involvement of his esophagus.

J. G., aged 62, male, white, came to me on May 30, 1922, complaining of hoarseness of 2 years' duration with coughing and pain. Laryngoscopy was done and a specimen removed for examination. *Diagnosis:* Carcinoma of the larynx. After a preliminary tracheotomy, a complete laryngectomy was done July 18, 1922, and the patient died of a recurrence on August 2, 1923, 13 months after the operation.

H. L., aged 69, male, white, was referred to me on August 9, 1923. Upon indirect examination, on the left vocal cord at the junction of the middle and anterior third, was seen a soft polyp-like growth the size of a pea. A specimen was removed for examination and the report was: "Epidermoid Carcinoma of the Larynx". Laryngectomy was done on April 9, 1925, and the patient died 3 days after the operation. This case was a very poor risk to start with, being a nephritic and diabetic. I suggested to him on August 16,

1923, that he should have a complete laryngectomy. It was not until 2 years later that he made up his mind for operation and then only when he was nearly asphyxiated twice because of the growth almost closing up his entire larynx.

G. S. O., aged 72, male, white, was referred to me by Dr. Fisher, of Asbury Park, because of intrinsic carcinoma of the larynx. The operation was performed on June 23, 1924, two-thirds of it being done under local anesthesia. This man is alive, walking around and apparently feeling all right.

*Hereditary History:* Father died of some lung condition. Mother died of pneumonia at the age of 82. Brother died from sore in back of head.

*Antecedent Personal History:* Has enjoyed good health.

*Present History:* Sputum examination negative. Hoarseness for 3 months, coming on gradually.

*Physical Examination:* Head, negative. Eyes, glasses corrected. Ears, negative. Nose, polypi removed at age of 65. Mouth, negative. Neck, negative. Throat, hoarseness. No pain. On right cord, growth at junction of anterior and middle third. Some sluggish movement of cord. Chest, negative. No cough. Wassermann, negative. No x-ray pictures taken.

Laryngoscopy, June 4, 1924:

Conditions found on first endoscopy: Growth on right cord at junction of anterior and middle third. Specimen removed for examination. Diagnosis: Carcinoma of the larynx, intrinsic.

*Laryngectomy, June 23, 1925:* Skin and deep structures infiltrated with 1% novocain for the skin and 0.5% novocain for the deeper structures. An incision was made from the hyoid bone to the suprasternal notch and a cross incision at the hyoid bone to both sides of the neck, the completed incision forming a T. Entire larynx and 4 rings of the trachea completely skeletonized; the thyroid gland clamped, cut and ligated at the isthmus. All bleeding stopped. Ether was then given by mouth and the trachea amputated at the second ring. Ether transferred to the tracheal stub by means of a tube fitting into the trachea. Larynx dissected from the esophagus

upward to a point in back of the arytenoids. Larynx dropped back in place and an incision made through the hyothyroid membrane into the hypopharynx. One yard of gauze, 2 in. wide, was packed into the mouth through this opening. The rest of the larynx was removed by cutting into the hypopharynx; all bleeding ligated and the esophagus closed with catgut. Just before the last stitch was tied, a French 22 nasal tube was inserted into the esophagus through the nose. Four anchor sutures of silkworm gut anchored the trachea to the skin. The skin was sutured to the mucous membrane of the trachea by means of plain silk. Three double tube drains were inserted, one on each side of the esophagus into the lower plains of the neck and the other high up in the region of the hypopharynx.

The summary of my own 5 cases is as follows:

(1) Thyrotomy; patient living and well after a period of nearly 6 years. (2) Laryngectomy; patient died 4 months later of a recurrence. (3) Laryngectomy; patient died 13 months later of a recurrence. (4) Laryngectomy; patient died 3 days after operation. (5) Laryngectomy; patient living and well at a period of 1 year after operation. Including Dr. Barkhorn's 5 cases, with 3 of which I have assisted, brings the series up to 10. Dr. Barkhorn's results are far better than mine, he having had but 1 death.

There is, however, a great deal in getting the cases early and it is a plea that I make that in case of hoarseness extending over a period of a few months, unaccounted for, the patient is entitled to a complete laryngeal examination, and it is only by such coöperation that we can expect to reduce the mortality in carcinoma of the larynx, where if recognized early, the results, for cure, are far better than in any other part of the body.

As to hyperplastic stenosis, caused by diphtheria of the larynx, my results are better. Of these 17 cases there were: hyperplastic, 9; cicatricial by loss of cartilage, 1; by loss of muscular tissue, 5; by loss of fibrous tissue, 2; a total of 17.

As to trauma, these were divided into: tracheotomic, 4; intubational, 12; operative, 1.

Procedures: laryngostomy, 4; laryngeal



bouginae after tracheotomy, 11; tracheal bouginage, 1; fibrous band cut, 1; total, 17.

In the case of A. B., the tracheotomy tube was removed on October 22, 1924, and just prior to coming to Atlantic City, I heard that the child had died of acute miliary tuberculosis on May 30, 1925, the death in no way attributed to his stenosis or treatment.

C. P., aged 8 years, female, white, was admitted to the hospital on January 2, 1917, and discharged on July 11, 1922.

Fibrous stenosis, from laryngeal diphtheria. Procedures: Tracheotomized January 4, 1917, by Dr. Lynah. Tonsillectomy May 25, 1923. Laryngostomy. Decannulized May 8, 1924. Plastic May 8, 1924. Cured.

M. M., aged 11 years, female, white, was admitted to the hospital on October 11, 1918, and discharged August 16, 1922. Fibrous stenosis above tracheotomy, due to laryngeal diphtheria. Procedures: Tracheotomized November 26, 1919, by Dr. Lynah. Laryngostomy October 5, 1922. Plastic May 8, 1924. Tonsillectomy December 13, 1924. Wearing Jackson tube because of panic.

J. E., aged 16 years, male, white, was referred to me as a case of laryngeal stenosis. Was admitted to St. Michael's Hospital on October 12, 1923, and a low tracheotomy was done on October 15, 1923. Procedures: Laryngostomy November, 1923. Decannulized April 8, 1925. Laryngostomy tube removed April 8, 1925. Tonsillectomy April 29, 1925. Improved.

As to the treatment of these conditions, if the case has been intubated, the first thing is to get rid of the intubation tube, which usually is done by a tracheotomy, and when I speak of tracheotomy, I mean what is generally taught and known as a low tracheotomy, which, of course, is the only one to do. If some one should ask me if there is any need for such small service as this, my answer is "yes". Why? Because the majority of tracheotomies I have seen have been high. All tracheotomized patients I have seen have not had the proper size tube, they were all entirely too small. The laryngeal stenosis cases I have seen have been a result of high tracheotomy and very little, if any, attention has been given to the postoperative care of the patients. To say that your work ends

after a tracheotomy has been performed is erroneous; it is just beginning.

In vain have some authors of large volumes of surgery tried to classify, to specify their differentiations, and to give the reasons for the various types of tracheotomy, so stupidly and improperly done by many operators. Tracheotomy, Dr. Chevalier Jackson states, is the worst done of all operations and is perhaps the only one that has not been raised to its proper modern plane; and this is true. Yet I would not for one second belittle the brilliant, spectacular, if you will, life-saving procedure of any surgeon doing any kind of a tracheotomy after a patient has ceased to breathe. Even so, a low tracheotomy can be done if you will but remember the two-finger operation of Jackson. But why wait until they cease to breathe before doing a tracheotomy unless it is an emergency? It is just like a gastrostomy. We all recommend that it be done early, but everyone does it late.

Indications: You do a tracheotomy either for a therapeutic or a mechanical reason; disease or injuries involving or likely to produce obstruction of the laryngeal air-way. The functional rest afforded by a timely tracheotomy may go far toward reducing the degree of inflammation following injuries to the larynx, and thereby promoting a more rapid cure and a better functional result. It is a question in my mind whether it is not better to do a tracheotomy than intubation in laryngeal diphtheria, thereby lessening laryngeal stenosis following intubation; in dyspnea following the entrance of a foreign body in the larynx, trachea, or esophagus (as was very brilliantly demonstrated by Dr. Barkhorn recently in a tracheal foreign body, in which case a timely tracheotomy saved the patient); as drainage of the lung following the removal of peanut kernels in infants; in bilateral abductor paralysis; papilloma of the larynx in children; acute edema, and as a preliminary step in certain operations of the larynx. The same surgical asepsis and team work should prevail here as for any other operation.

General anesthesia is to be condemned; no case that needs a tracheotomy should be subjected to the added risk of a general anesthesia. Some local anesthetic should be used in the skin only. The patient at operation

should be in the recumbent position with a sand bag under the shoulders and neck placed so as to bring the trachea into prominence. The head should be low and in a straight line until the tube is inserted. Incision, as I have stated before, should be from the thyroid cartilage to the episternal notch. You should forget the classic incision for a high and a low tracheotomy as taught in college days and make the long one. You gain nothing by making a small one, but the risk of mediastinal infection and emphysema. Even though some man may desire to do this classic high tracheotomy his incision should be a long one and left open, remembering that a small incision is like working through a funnel, the deeper you go the narrower the bottom, and if you are annoyed with bleeding it is hard to control and the blood drains directly into the trachea, possibly causing unnecessary complications.

The interval between the sternohyoid muscles is exposed and they are drawn outward, as well as the sternothyroid muscle. The isthmus of the thyroid gland is exposed and pushed out of your way either upward or downward or, if very large, the isthmus is divided, pushing away any veins of the inferior thyroid plexus, the trachea is exposed and all bleeding points ligated. At this point, in order to abolish the annoying cough after the trachea has been opened, some advocate the injection of cocain into the trachea. To do this is to abolish a very valuable aid in ridding the larynx and trachea of thick mucus, for all the mucus coughed into the operator's face for a few seconds is just that much less for the patient to aspirate as a possible cause of lung abscess or pneumonia. After all bleeding points are ligated, the third, fourth and fifth rings of the trachea are opened and the proper tube inserted, being careful to make one incision in the trachea in the median line, not to cut the posterior wall, and do not stop when you first hear the hiss of air and try to enlarge your tracheal opening with dilators, for you will only cause damage by ripping the trachea. The cricoid cartilage should never be cut as it is the only complete ring of the trachea. Some men prefer to sew up the wound, but in so doing they run the risk of emphysema and mediastinal infection. A transverse incision in the trachea invites a

danger by causing necrosis of the tracheal rings. The incision in the trachea should never be above the second tracheal ring. If in an emergency the larynx has been opened above the second ring to resuscitate the patient, the operation should be continued lower down, so as to prevent any laryngeal stenosis by improper placing of the tube, remembering that the subglottic region of the larynx is the narrowest part and does not tolerate much trauma.

*The Proper Tube:* In all tracheotomized cases I have seen in adults, the tube was entirely too small, using a child's tube in an adult. No hospital should be so poorly equipped as not to have a duplicate set of silver-plated tracheotomy tubes. The majority of tubes in hospitals are too small, and are made of aluminum which corrodes. On account of its smallness, if there is much postoperative swelling, the tube will be pulled out of the trachea and the patient will die of asphyxiation. The hard rubber tubes cannot be boiled and should not be used. These, as well as the aluminum tubes, have a fenestrum which is useless and cause granulations to form. Every case should have a special nurse for 48 hours. The room should be warm and moist; the inner tube should be removed and cleaned as often as is necessary, which may be every 5 minutes; the dressings should be changed as quickly as they are soiled; the entire tube should be changed every day; permitting a tube to remain indefinitely increases the chances of infection and subjects the patient to an added risk which is entirely unnecessary.

After a laryngostomy in which there has been a fibrous stenosis of the trachea or larynx, this portion of tracheal and laryngeal structures must be severed and the wound kept open until the trough has been epidermized. In the closure of this opening I have followed the technic of Dr. Charles F. Nassau, as follows: Under novocain anesthesia, I dissect a tongue of skin and fat downward, with its base at the lower end of the laryngostomy opening. This should, of course, be cut broader and longer than appears to be necessary on account of shrinkage. After raising this flap and the shrinkage occurs, it will then be only slightly wider than the edge of the opening, when you take into account



the uncut edge. Make the incision upward in the median line from the upper end of the opening. Dissect the skin away fairly freely from the underlying tissue. Now comes the only part of the operation from which there must be no deviation. The use of catgut as suture material in the neighborhood of the opening is absolutely forbidden. Even chromic gut must not be used. Use straight milliners straw needles, sharp No. 9, threaded with fine black silk, say Brainard and Armstrong machine twist spool silk No. 000. Bring your line of sutures as close as possible to the base of the turned up flap. Enter the needle on the skin surface of the base of the turned up flap. Pick up the edge of the skin around the opening and come out on the mucocutaneous surface. Tie these sutures with at least 3 knots and cut as close as possible to the knot. Alternate the sutures on each side as you close the opening from below upward. It is not necessary to use a mattress suture.

As you can readily understand, the procedure is analogous to an end-to-end suture of the small intestine where you tie the knots inside the bowel. Dr. Clerf tells me that they never had any trouble with these sutures, nor have the patients ever noticed that they come out although, of course, they are cast off in course of time. These sutures should be placed very close together, making an almost watertight junction. After the flap is sewed in place it is obvious that little remains except to slide the skin over from each side and suture in the median line. Sometimes I have had to make small variations from the straight line to a line shaped like a Y. That will be the least part of the trouble. Naturally, I do not mean to use the fine silk sutures for the superficial layer of stitches, although I do as a rule depend upon them except for 3 or 4 fine silk-worm gut sutures to take up what little tension there may be. I think it is wise to put in 2 or 3 very small drains. In the event that suppuration appears to be impending, under no circumstances remove any of the sutures but start the use of hot boric acid compresses, kept hot by a water bag. Change these compresses every half hour for 24 hours.

In recapitulation or summary:

In neoplastic stenosis of the larynx much can be accomplished if the cases are seen early

and it is a plea that I make that in case of hoarseness that has extended over a period of a few months, unaccounted for, the patient is entitled to a complete laryngeal examination, and it is only by such coöperation that we can expect to reduce the mortality in carcinoma of the larynx, where if recognized early, the results for cure are far better than in any other part of the body.

Laryngofissure is justifiable in growth limited to the anterior commissure or anterior part of the cords, laryngectomy in those involving more, but still intrinsic. Radium has been of no value in my experience.

In hyperplastic stenosis following diphtheria, is it not better to do a tracheotomy than to continue intubations, thereby lessening traumatism of the larynx?

In tracheotomy, far better results will follow if a low tracheotomy is done, keeping away from the cricoid cartilage. If some of the above suggestions are carried out, much will be accomplished in the proper elevation of the life-saving operation of tracheotomy and a fewer number of tracheal stenoses will be seen. A timely tracheotomy, properly done and with proper postoperative care, will give better functional results than waiting and doing a quick tracheotomy with possibly bad results.

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Upon completion of his paper, Doctor Orton, with permission of the President, showed 3 cases, one a man 73 years of age on whom a complete laryngectomy had been done, now wearing an artificial larynx. The second case, that of a laryngofissure done 6 years ago. The third case, a laryngeal stenosis for which a laryngostomy had been performed.

#### DISCUSSION.

**Dr. Walter B. Johnson:** I would like to say a word. It certainly is gratifying to have a member of our society come here and present a series of cases such as these, with such wonderfully successful results. It is also quite remarkable that he has been able to gather together this very considerable number of cases. These cases are not so common. Among children, and generally speaking, in our community, for instance, since 1882 we have done some hundreds of intubations of the larynx, and we have never been unfortunate enough to have a laryngeal tube that could not be removed on account of continued retention. neither have we had at home enough trouble to cause any serious disease or death as the result of injury due to the presence of the tube. In the

earlier days before it became so easy to do this operation—as it would appear to be from what Dr. Orton says, although I think most of us, should we have undertaken to do it, would have found out that we were in very great difficulty—we used to operate directly on papilloma. I operated successfully on a girl many years ago for papilloma of the larynx and removed, in a number of sessions a two dram vial of tissue, and she has been alive and well for years. I have seen cases of hickory nut shells and peanuts lodged in the larynx and have made tracheotomies on them and have generally succeeded in getting the foreign body, whatever it might have been, out through the laryngeal opening. I feel that I should certainly fail miserably if I were confronted with any such series of cases and operations as the Doctor has been confronted with, and I feel that the thanks of this society and his community are due the Doctor for the good work he has done and for presenting this very excellent paper and this wonderful exhibit.

**Dr. Henry C. Barkhorn:** It is a great pleasure to discuss Dr. Orton's unusual paper on "Operative Laryngology". It is a pity Dr. Tucker is not here—coming from Dr. Jackson's Clinic with its large mass of material, with the resulting ability to give a statistical summary. Historically, we all remember in our student days, not always so very remote, the large number of chronic tube cases of tracheotomized patients whom nobody was able to decannulize. This condition no longer exists. By painstaking prolonged treatment, such as Dr. Orton carried out in his 17 cases, these cases can be restored to economic usefulness with good airways and useful voices. Iglauer was perhaps one of the first to attack this problem. He simply doubled a piece of rubber tubing, tied it at each end to form an ellipse and put it into the larynx on a continuous string from the mouth to the tracheotomy wound, thus, by continuous pressure, dilating the laryngeal stenosis. While this method was useful it increased the hospital days of the patient and if the pressure became too great caused new ulcerations and stenosis. By the various Orton modifications of the Jackson procedures the same results are obtained with less uncertainty. In papillomas of the larynx we have not lost a case and have frequently succeeded without tracheotomy. We feel very strongly about the expediency of doing tracheotomies of choice and not of necessity and, of course, as a low tracheotomy is the only method by which there is any hope of ultimate removal of the tube, the high tracheotomies should be eliminated from the text books. It is astonishing how little uproar and confusion there can be in a judiciously timed tracheotomy under major surgical technic. Those cases of laryngeal stenosis which we are unable to dilate are long, tedious after-treatment propositions. An entire new laryngeal passage must be built around a large rubber tube and it takes from 6 months to 2 years for a good firm epidermized channel to form. Then comes the problem of the external closure by a plastic, and even then, as in one of Dr. Orton's cases, panic may cause so much spasm of the neck muscles and sucking in of the superficial portion, which consists only of two layers of skin, that it is necessary to reopen and start all over again. Were I fated to have a carcinoma at all, I would be quite content to have it of the larynx, for it is within a cartilaginous box. Technically, laryngectomy is not difficult. In the time of Gluck it was a crude unsurgical procedure but Crile, by his two-stage method,

taught us much and now MacKenty by his refinements has made a one-stage operation feasible without immediate mortality. It is necessary only to do as much work as possible under local anesthesia so that that the other portion can be cut down to half an hour. To block off the trachea with a large rubber tube wound with bismuth gauze in a cone shaped manner, to block off the mediastinae with iodoform gauze, and to pack off the mouth with a large pack, just before the final removal of the entire larynx, is recommended.

Dr. Orton's results have been very gratifying and I feel the community is to be congratulated on having a man with the mental equipment, the patience and the disposition to sacrifice the more remunerative portions of our specialty so that he may have time to study and time to devote to the tedious detail of this most refined specialty within a specialty.

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## SURGERY IN DISEASES OF THE CHEST.

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It is not my intention to describe the technic of the various surgical procedures now being employed by thoracic surgeons, but simply to give a short resumé of those operations which have proved of value in relieving and alleviating certain pathologic processes of the chest. This information is rather difficult of access and is scattered through many special journals and has up to the present day not been formulated and, in many instances, not brought to the attention of the medical profession at large. In a measure this is fortunate as chest surgery is still in its infancy and any extravagant claims would only detract from its usefulness. Advance lies, as in all other departments of medicine and surgery, primarily in a correct diagnosis and then in deciding on the proper treatment. True intrathoracic surgery is comparatively rare and in an analysis of all operations in New York City for the period of one year Dr. Lilienthal found the ratio to be 1 intrathoracic to 5000 of all other operations reported.

### Problems and Difficulties.

In the beginning, the greatest obstacle to exploring the chest was lung collapse and mediastinal flutter or flapping resulting from the open pneumothorax. A variety of apparatus



has been devised—some very cumbersome and intricate and in the main almost prohibitive in cost. Latterly this has been overcome by simple intrapharyngeal insufflation anesthesia. This is quite satisfactory for practically all surgical intrathoracic procedures, the collapsed lung being very readily expanded by holding the patient's mouth tightly closed and increasing the pressure in the anesthesia apparatus. Seven millimeters of mercury negative pressure will hold the lung to the chest wall. Care must therefore be exercised in raising the positive intrapulmonary pressure as a rupture with subcutaneous emphysema may result. Latterly local anesthesia has been employed to a great extent and there has consequently been less anxiety about lung collapse. I will again revert to this under anesthesia. Among other problems of chest surgery, is the patient's general condition, which is usually very poor. Transfusions are frequently indicated and should not be done too late. Postoperative pulmonary hemorrhage is another, but can usually be readily controlled by packing the lung through the chest wound. Preventing generalized pleural infection will be touched on under asepsis.

#### **Asepsis and Anesthesia.**

The aseptic precautions here are as elsewhere in surgery. The pleura is less resistant to infection than the peritoneum and a free pleural cavity cannot be walled off. In the abdomen, coils of intestines will rapidly adhere and keep an abscess localized. In the pleural cavity, there is no walling off unless the pleural leaves are adherent or are made so by a two-stage procedure. Besides this, we have the very serious, nearly always fatal mediastinitis to bear in mind. Under this heading let me sound a warning: Never aspirate a lung abscess unless you are prepared to operate and drain the same shortly. The bacteria in a lung abscess are very virulent, mainly anaërobic and liable to cause severe and frequently fatal infections anywhere along the tract of the needle..

Wherever possible, local anesthesia should be given the preference. Gas-oxygen may

be used as an adjuvant. Under paravertebral block, very extensive rib resections may be made. The surgeon is not hurried. The patient can coöperate in holding his breath and blowing out his lung and, most important of all, the cough reflex is not eliminated. I know that I have operated several times under local anesthesia successfully when a general would have been fatal.

#### **Empyema.**

Incision and drainage of the so-called acute empyema is probably one of the oldest surgical procedures known. Everyone is familiar with it and I will say little concerning it except as a warning. Before doing a thoracotomy be certain that all the pneumonia has subsided, that the pleural adhesions are firm enough so that a localized empyema will not develop into a general one and that the mediastinum is fairly well fixed. We all have a tendency to consider the mechanical effect of the fluid on respiration and overlook the toxic element of dyspnea. Many an individual is quite active and leads a useful life with less than one lung functioning provided there are no active bacteria present producing toxins. On the whole, I should say most empyemas are drained too early. Personally I have seldom used the closed method. If, while the pulmonary process is still active, the pressure, gauged by cardiac displacement, x-ray and dyspnea, seems too great, I employ aspiration and repeat it when necessary. To know when to drain often requires nice judgment and I know of no fixed rule to follow. We must take into consideration the amount and the character of the fluid, the type of the organism, and remember that early effusions are frequently protective and that many reabsorb. Above all, be certain that all the pneumonitis has subsided before attempting any radical measure.

In chronic empyemas, the treatment is governed by the size of the cavity, the infecting agent, the presence or absence of bronchial fistula, condition of lung, and duration of disease. Small cavities may be closed and large ones diminished in size by causing reëxpansion of lung tissue. Fre-

quently, irrigation by Dakin's solution with blowing exercises will be all that is necessary to effect this. Before employing irrigation one must be certain that no bronchial fistula exists. When the limit of usefulness of these simple methods has been reached the lung may be decorticated, and if normal it will reëxpand even after being collapsed for a considerable period of time, or some plastic chest wall-collapsing operation can be planned to obliterate the cavity. This is best done in several stages and under local anesthesia, as the patients are poor surgical risks. It is essential that the size and shape of the cavity be definitely known. Injecting bismuth with cotton seed oil followed by an x-ray will give the needed information.

### **Bronchiectasis, Lung Abscess and Gangrene.**

Sharp, clear, definite distinction cannot be drawn between these processes. They shade into one another and one is frequently associated with or may supervene another.

All cases of lung abscess should be first treated by postural drainage, rest, fresh air, endoscopy and possibly pneumothorax. Endoscopic drainage, irrigation, and local treatment often give brilliant results especially, in my opinion, if the abscess results from aspiration. If there is no improvement, these measures should not be persisted in too long and myocardial degeneration, amyloid disease or albuminuria, allowed to develop. A complicating empyema demands immediate surgical intervention, namely, drainage of the empyema and later, if necessary, of the abscess. Contrary to expectation, my best results have been in this type of case.

The surgical procedure at present giving the best results in lung abscess is one devised by Evarts Graham, of St. Louis. The abscess is located and portions of sections of three or more ribs resected over the affected area. It is essential that the pleural leaves be adherent to prevent empyema. Fortunately this is usually the case. If not, they must be sutured and the abscess opened or made to adhere by means of a two-stage operation. So far the technic is common to most methods. Graham,

however, opens and destroys the abscess by using heavy plumbers' soldering irons, heated cherry red. He has had very good results. Not too much must be done at one sitting. Anesthesia is required for the chest wall section only. Subsequent lung cauterizations are painless. One is tempted to cauterize too much and too frequently. Two weeks or more should intervene. The cavity is lightly packed with gauze.

Bronchiectasis should first be treated conservatively, as laid down under lung abscess. If there is no improvement and the disease is unilateral or confined to one lobe, pneumothorax or surgical collapse may be offered. Another procedure is partial pneumonectomy or lobectomy. Both have a high mortality. Graham's slow cauterization offers the best outlook. With diathermy, I have had no experience. It may be superfluous to state that bilateral and extensive bronchiectases are beyond surgical help. Gangrene has a very gloomy prognosis and when diagnosed and localized may be treated similarly to abscess.

### **Intrathoracic Tumors.**

The chest cavity is a silent region and tumors when sufficiently large to produce symptoms are usually too extensive for removal. Provided an early diagnosis can be made and the tumor removed, the prognosis is favorable, since metastasis are late in developing. X-ray and radium may be used as palliative measures. The resulting fibrosis must be considered as it may cause marked displacement of the heart.

### **Carcinoma of the Esophagus.**

This still presents a very discouraging outlook. A few cases have been operated upon with moderate success. Rovsing, Törek, Meyer, Lilienthal, Headblom and Eggers have reported successful extirpations. More work must be done by the surgeon in this field. As Dr. Meltzer, speaking before the New York Society for Thoracic Surgery, said concerning carcinoma of the esophagus, "More of these patients should be referred to the surgeon for operation. How will the surgeons ever make progress if you deny them the material on which and with which to gain experience"?



### **Chest Wall Tumors.**

These should be removed surgically as soon as diagnosed. Underlying adherent lung and pericardium freely resected. The great difficulty lies in the ultimate closure and plastic readjustment of the bony defect.

### **Purulent Pericarditis.**

If aspiration does not afford sufficient relief and improvement, operation is indicated. This should be done early and ample drainage provided. The pericardial sac has on several occasions been successfully irrigated with Dakin's solution.

### **Heart.**

Many wounds of the heart have been repaired. Care must be taken in manipulation so as not to kink the great vessels. Latterly, experimental work has been instituted with the view of attacking the constricted mitral valve in stenosis. One case in a child has been reported as successfully operated on and improved. There may be other cases which have escaped my notice.

### **Unilateral Tuberculosis.**

Cases in which artificial pneumothorax is indicated but impossible of performance on account of pleural adhesions, may have an extrapleural thoracoplasty performed, resulting in a permanent collapse. These cases must be carefully selected. They should be old, chronic cases in which all other therapeutic measures have failed to bring about an arrest of the disease, and the lesion must be unilateral.

### **Injuries of the Chest and Contents.**

These must be treated individually. Open pneumothorax should be closed. Tension pneumothorax should be tapped by inserting a needle and relieving the positive pressure. Hemothorax, if not large, and slow in accumulating, may be treated expectantly and later the unabsorbed fluid blood aspirated. A rapidly filling hemothorax should be explored and the hemorrhage controlled. Time is too short to discuss every traumatic possibility.

### **Foreign Bodies.**

If aspirated, they should be removed by oral endoscopy. If entering through the chest wall, they should be, as a rule, removed through an exploratory incision after

careful x-ray localization. Usually, a foreign body may be safely removed no matter where located.

### **Conclusion.**

The diagnosis of chest disease requires the close coöperation of internist, roentgenologist, endoscopist, and surgeon. Many cases are very obscure and only in this way will progress be made. In closing I wish to bring to your attention exploratory thoracotomy. If after exhausting all diagnostic measures and means we are still in doubt and feel that we are confronted with a process amenable to surgical treatment, we are, in my opinion, justified in offering the patient an exploratory thoracotomy. We all, or at least a great majority, favor exploratory celiotomy in obscure abdominal lesions. The risk and shock of exploratory thoracotomy is little if any greater provided you do nothing more. This procedure, if judiciously employed, not as a short cut to diagnosis, but after all means of diagnosis have been exhausted, will, in my opinion, prove to be of as great a benefit to those suffering with obscure disease of the chest as exploratory celiotomy has been to those with obscure abdominal disease.

### **DISCUSSION.**

**Dr. Francis R. Haussling:** Mr. President, I think Dr. Dieffenbach deserves a great deal of credit for the interest he has shown in this very disappointing field of surgery. I think he should be encouraged. Since he has gone into this line of work more extensively, I have referred all my cases to him, because I feel that in the long run the patient has a greater chance of life and health under the care of a man who is devoting himself more or less entirely to this field of surgery.

It is only on rare occasions that we have the opportunity of listening to a paper on this subject, in which comparatively few men are deeply interested, and fewer of them have enough material on which to base a paper. Chest surgery got its first marked impetus almost a quarter of a century ago, in 1903-1904. In Breslau, I saw von Mikulicz perform his first operation on a human being, in the Sauerbruch negative pressure cabinet. That was almost 25 years ago, and progress has been comparatively slow since that time. The most important factors, to my mind, in reducing the mortality, have been three. The first of these has been the method of administering the anesthetic; the second, the stage operation, and the third the gradually increasing number of men of marked ability who have become interested in the subject.

In so far as the administration of the anesthetic is concerned, this has been a great factor, and especially if you do these operations in stages. Many of them can be done under local anes-

thetia. Novocain can be used in large quantities, with practically no toxic effect. The stage operation, of course, has added a great deal to the reduction of mortality. I think that we can all remember the terrific mortality occurring just in one class of cases,—chronic empyema,—in which the Schéde operation or the Estlander operation was performed, as compared with the marked reduction in mortality by applying the stage operation, doing a little at a time, doing it in 2, 3, or more stages. I did a considerable number of these operations over a period of years in very small stages, and have had no deaths. It is quite a contrast.

In regard to hemothorax, what the doctor said is so—that hemothorax, traumatic hemothorax had better be explored, if rapid and extensive in forming, but many of these cases are slow in forming, and some 10 years ago the then County Physician of Essex County asked me why we surgeons didn't take the blood out of the chest by aspiration in these patients. That he had autopsied 6 or 7 cases that had no other traumatic lesion, but a chest full of blood. I said we would do it, and since that time I am sure we have reduced the mortality, because we haven't heard of these patients dying with this single lesion, and we should have heard, because we are always told what they find at autopsy. This will be true to an even greater extent now in Newark since our pathologist at the Newark City Hospital is also County Physician.

The Doctor sounds a note of warning in regard to the virulence of the bacteria found in lung abscess. This is very true. I want to add to this another warning on aspiration. In infants and small children, it is a short distance from the external chest wall and through the diaphragm into the peritoneal cavity in case there is no fluid present, in the pleura. A case in point: A child was transferred to our service from the Medical Service in Newark City Hospital—transferred with a diagnosis of empyema, on the strength of the physical findings, and pus on aspiration. At operation, we found no pus in the pleural cavity, but a puncture could be seen in the diaphragm. Wound was closed without drainage. We then evacuated about a quart of pneumococcus pus through an abdominal incision. The child recovered in spite of the surgeon, and the pleura was not infected in spite of the 2 punctures through the pleura into the abdomen.

In discussing intrathoracic tumors, the Doctor said that intrathoracic tumors occurring in the chest cavity are usually not sufficiently extensive to cause marked symptoms. I think that is true. It is only when tumors in the chest involve or press on vital structures, that we begin to get marked symptoms. I think diagnosis can be arrived at a little earlier if there are 2 points borne in mind: One, that any persistent, deep-seated pain in the chest or along the intercostal nerves, or even on the abdominal wall as low as the appendix, accompanied by tenderness, warrants a diagnostic x-ray, and if the x-ray shows nothing, and the pain persists, a repetition of the x-ray. I think that applies to all surgery. We all rush to diagnostic x-ray, but very few of us think of having repeated x-ray if the pain persists. I think in this way we can probably arrive at a diagnosis a little earlier.

A few words about deep x-ray therapy. As I see it, deep x-ray therapy of course cannot take the place of exploratory operation in doubtful chest cases. In my opinion, surgery should be the method of choice, if there is any possibility of removing the tumor, followed by deep x-ray

therapy. If the tumor is absolutely inoperable, of course, deep x-ray therapy should be used. We all know that with deep x-ray therapy, intra-abdominal tumors disappear in a most marvelous manner, but we should always be very guarded in our prognosis, even though the x-ray shows a lesion and the patient no longer has subjective symptoms, because these tumors have a habit of recurring in just as mysterious a fashion, and most of them do recur.

**Dr. Pollak:** Mr. President, the essayist, in his very able summation, said that this was largely a paper for the surgeon, but he said, likewise, it was indicated that the surgeon and the internist should agree upon this subject. I am not talking about chest surgery in general, but I desire to say a word about chest surgery, in so far as it applies to tuberculosis and to bronchiectasis.

I believe it was a physician, Brauer of Hamburg, who was first induced to do chest surgery, and how successful he has been, can be corroborated by the thousands and thousands of artificial pneumothoraces, that have been employed with so much success.

I believe that there is an erroneous impression among the profession, generally, in so far as tuberculosis is concerned, when the profession throw up their hands and say that nothing can be done. I think this is an attitude which is incorrect, and I believe that the time has arrived when we ought not to say, or we ought not to permit any one to say that nothing can be done for the tuberculous. We have seen a tremendous amount of successful surgery done in tuberculosis, usually of the unilateral type. The Doctor may be correct when he says that it is questionable whether there is any tuberculosis which is of unilateral type, but when we speak of unilateral type, we mean that type where there is manifest disease on the one side, and the other side is practically clear, or where there are no evidences of symptomatology.

We have seen some very wonderful success in regard to bronchiectasis. While it is true that during the last year we have had 4 cases operated upon, 2 of bilateral bronchiectasis, the one more advanced in the one side than the other, children who had been erroneously diagnosed as tuberculous, who had been sent to the institution, have been kept under observation until we were fairly convinced that there was no tuberculosis but that we were dealing with a bronchiectasis. In 2 of these cases we had some result for 2 or 3 months after the entire removal of the lobes; in other words, a lobectomy was done. The children did very well immediately after the operation, but died a month or two later, very likely due to some causes resulting from the after effects of the operation. However, in 2 cases of bronchiectasis that were operated upon by the complete compression done by the two-stage method, the children have entirely recovered.

It is true that in surgery as applied to tuberculosis, the results are not generally known, and yet the results at the Walter Reed Hospital, by Lambert and Miller, the splendid results of Brauer, Neumann and Sauerbruch are very encouraging.

Apropos of that it might be said that the Doctor did not mention a certain operation which is used in connection with this work, which is very simple. In the cases where pneumothorax cannot be employed, the operation of phrenicotomy is now employed very successfully. The operation is very simple. I saw Neumann and



Sauerbruch do it last year. They cut down to the phrenic nerve, catch it on the hemostat until they hear the nerve fracture and then there is heard a sudden collapse of the diaphragm. Many German and Swiss surgeons have attempted to do this with success. I saw 2 of them performed by Jacobius, and it was very interesting. Those are operations where, by reason of their adhesions, an endoscope is introduced into the chest cavity and these adhesions are burned out, or, so to speak, cut down, and after that operation, pneumothorax can be applied and compression accomplished.

I believe we are facing a new era in surgery. I believe that the consumptive and the more unfortunate individual who is afflicted with bronchiectasis has a hopeful future because of chest surgery, and I am firmly of the conviction that as the efficacy of chest surgery becomes better recognized and realized, the consumptive and the bronchiectatic and others will benefit by reason of our knowledge.

**Dr. Ernest A. May:** Dr. Dieffenbach and Dr. Haussling have mentioned the value of the x-ray and radium therapy in these conditions of the chest. In this field, where surgery is still in its infancy, radiation therapy is of comparatively great value, and I am very sure as soon as surgery is more experienced in procedures in the chest and operative measures, that the coöperation of the surgeon and the roentgenologist will be of great importance.

It might be of interest, from the standpoint of the roentgenologist, to give a brief resumé of what the indications are and what results can be expected in deep-ray therapy of the chest. The results are not as discouraging as, for instance, in cancer of the bladder, as we heard yesterday. On the other hand, one must not expect too much in advanced cases. The value of deep-ray therapy is limited, as every other method is limited. It offers only palliative results in hopeless cases.

There has been a great deal of over enthusiasm in deep-ray therapy, as was the case with every new method of therapy in medicine, but as we are now passing this stage, we are able to draw the lines of indications much clearer.

When speaking about radiation therapy, we are mostly interested in the malignancies. Sarcomas, which occur primarily in the lungs, bronchi, pleura and mediastinum, or secondarily in the lungs as an early metastasis, often yield well to irradiation. Even permanent cures have been described. Primary carcinoma of the lung reacts comparatively well; although many cases cannot be cured, yet the progress of the disease can be arrested for some length of time and the patient can be given more comfort. It is easy to understand that in cases of secondary growths of the chest, the primary lesion should be given most careful attention, for we often find that after elimination of the primary tumor, the metastasis shrinks without treatment.

Here I would like to remind you that sarcoma and sometimes carcinoma often send very early metastases to the lung. In every case of malignancy, I therefore make it a practice to have the lungs radiographed, and thus avoid unpleasant surprises. In doubtful cases, such an x-ray often clears the question of diagnosis.

It is in the field of mediastinal tumors that roentgen therapy gives great satisfaction. Whoever has witnessed the decrease in size of such tumors, in particular lymphosarcoma and lymphogranuloma, however large they may be, and

has seen how within a short time these masses melt away, and how the dyspneic patient recovers his old vitality, will always return to this method of treatment. I am very sure that after a time the procedure will be such that the so-called inoperable tumor will be first treated by x-ray and then be operated upon by the surgeon. In a goodly number of cases the results are permanent, but in others recurrence happens, and in those the prognosis is poor. Further radiation is only palliative in such cases.

In cancer of the esophagus, no permanent cures have been described beyond a period of 7 to 10 years. Unfortunately, surgery has also shown only a very few good results. Naturally, whether the patient is treated with the rays or not, the indication for gastrostomy in cases of stricture remains the same. In the majority of cases it is possible to relieve these symptoms of stricture through irrigation with roentgen or radium rays through a longer period of time; in some cases for years. I myself have treated several, some with complete obstruction, who were able to swallow after treatment and remained in this condition up to death, in good comfort. Nevertheless, I would advise gastrostomy in all cases for several reasons.

Another condition in which the roentgen therapy proves to be invaluable is the thymus hyperplasia of infants. Shortly after irradiation, the dyspneic symptoms begin to decrease and with every day one can follow the decrease in size of the thymus shadow in the x-ray picture. Here is really a field where roentgen therapy can be considered as a life-saving procedure.

In the treatment of tubercular glands the roentgen rays remain the most valuable therapeutic measure. The infiltrated glands disappear and the degenerated and infected ones heal up much quicker and without the extreme scarring of untreated cases. Even in pulmonary tuberculosis, roentgen treatment has proved to be of value as an aid to the usual treatment. The best cases are the slowly progressing, the stationary, and those that tend to latency and also the cirrhotic. Cavities are no contraindication. Excluded from this treatment are only the rapidly progressing, the pneumonic, exudative, and all the acute progressive productive forms. In the tuberculosis of the ribs, sternum and spinal column, roentgen therapy is a valuable therapeutic adjunct; also some forms of asthmatic bronchitis, whooping cough, and last but not least, pneumonia, respond to the irradiation.

You will see from this short and incomplete description, that radiation therapy in the last 10 years has assumed large proportions in the therapy of diseases of the chest.

One more thing I again want to point out is that close coöperation between the surgeon, clinician and the roentgenologist is of very great importance.

**Dr. Dieffenbach:** I want to thank the gentlemen for their discussion of my paper. I think the great difficulty is that the subject I chose is a little too broad for the time allowed here. I am very grateful to Dr. Pollak for bringing out some points which I did not touch upon. To describe every method of procedure, I feared would make the paper too long and tiresome. I also want to thank the Doctor for his enthusiasm in describing some of the results. I felt that if I said that much, it might create the impression of over enthusiasm.

## SOME OBSERVATIONS CONCERNING HYPERTENSION.

THOMAS K. LEWIS, M.D.,

Such terms as hypertension, arteriosclerosis, hypertensive cardiovascular disease, cardiorenal disease, etc., are unsatisfactory and confusing; and just as unsatisfactory and confused is our knowledge of the condition or, rather, group of conditions, to which such nomenclature is applied. As a matter of fact, we do not know anything very definite, that is, with scientific accuracy, about the subject as a whole. Many keener observers and vastly more authoritative essayists than the author of this paper have failed to clear up the muddle and carry conviction in this subject. Therefore, it was with no thought of coining terminology or solving any problems, that this paper was written. We are attempting to discuss hypertension not as a disease but as a phenomenon of timely interest to every one in the practice of medicine. The alarming increase in the occurrence of hypertension among individuals of early middle life, together with the numerous tragedies, resulting from arterial disease, among our most valuable citizens are facts demanding our careful attention. Having had the opportunity of contact with a very great number of cases presenting hypertension, it was the purpose of the author, in writing this paper, to attempt to draw some practical conclusions from his observations that may be of value in managing patients presenting this phenomenon or symptom.

Whether hypertension is cause or is result, in what we shall broadly term arterial disease, one thing is certain, namely, that long-standing high blood pressure does result in the production of arterial changes. Investigation of the reports of experimental pathologists reveals the fact that the conclusion is practically unanimous, among such workers, that continued elevation of blood pressure results in damaging changes to the arterial walls, whether the hypertension be induced by physical or chemical means or by bacterial toxins or endotoxins.

I shall make no effort to review the path-

ology of arterial degeneration in detail but pass on, immediately, to the statement that, just as in any degenerative disease, when structural damage has occurred and the formation of scar tissue has superseded, there is no known therapeutic agent, at our disposal whereby we can cause regeneration of the destroyed tissue. Now, the application of the laws of physics to the circulatory apparatus would seem to indicate that, in hypertension, as the vessel walls lose their elasticity the diastolic blood pressure, of necessity, must rise in order that a satisfactory mean pressure may be maintained. Therefore, we arrive at the conclusion that elevation of the diastolic blood pressure indicates organic vessel changes and, when such is the case, cure is most improbable. This reasoning is borne out by facts. In 100 cases, treated in the dispensary of the University Hospital during the past 2 years, presenting hypertension, not a single case showing a diastolic pressure of more than 100 ever reverted to normal. The same holds true for 150 cases taken consecutively from my own case records. I do not wish to convey the impression that nothing remains to be done for these patients. Such is not the case, for, by careful attention, much may be accomplished in relief of symptoms and in prolongation of life. However, I wish to reiterate that any chance for cure has been lost when the diastolic blood pressure has risen much above 100 mm.; that is, after organic change in the vessel walls has occurred.

On the other hand, we see a goodly number of cases presenting a high systolic and low diastolic pressure responding to treatment and returning to normal. It would seem that the so-called benign hypertension is nothing more than a hypertension that has been of insufficiently long duration to have caused arterial damage, cardiac hypertrophy and renal incompetency.

What then is the conclusion? Simply, that if we would effect cures we must get our hypertension patients early and by exhaustive study endeavor to discover and correct such etiologic factors as, in the individual case, prove to be responsible for the production of the hypertension.



As has been stated before there is much about the cause of hypertension that is unknown. However, we have positive evidence that certain diseases, pathologic conditions and abnormal states have definite etiologic relationship to hypertension. There are undoubtedly many more factors that have as yet been undiscovered. As a practical means of approach, I have made the following classification from the standpoint of etiology: (1) Toxemias and infections. (2) Chronic nephritis. (3) Focal infection. (4) Nervous tension. (5) Plethora and overfeeding. (6) Menopause. (7) Essential hypertension.

(1) The toxemias and infections as the cause of hypertension do not need much discussion. Lead poisoning and syphilis are indisputably the cause of certain hypertension. No case presenting hypertension should be permitted to get by without a routine Wassermann test. It is just a question whether the longstanding repute of potassium iodid in the treatment of hypertension has not been gained entirely through its remarkable efficacy in certain undiagnosed cases of syphilitic origin. It is a fact that a vast majority of our cases derive no demonstrable benefit from the use of this drug. Previous infections have a much greater influence in the production of high blood pressure than is generally accorded them. In particular, typhoid fever is to be found recorded in the previous history of a very large number of our high tension cases. Pneumonia plays a less pronounced rôle. However, in general, it is my opinion that we are woefully wanting in our convalescent care of the typhoid and pneumonia case, in fact of all of the acute infections. The routine effort to keep these cases away from work, rather than to hurry them back to the job, should prevail.

(2) Chronic nephritis is unquestionably a cause of ultimate development of high blood pressure and needs little discussion. Any patient who, especially in youth, has presented an acute nephritis should be kept under constant periodic observation. Undoubtedly many of our cases slip over into a low grade chronic nephritis which, commonly, runs on for years undetected. And it should be borne in mind that chronic

nephritis is one of the most difficult of diagnoses to make.

(3) Focal infection has here, as in every branch of medicine, been seized upon with gusto; and teeth, tonsils and gall-bladders have been disappearing with alarming rapidity from our middle-aged clientele. There is much in this matter of focal infection but it is about time that we take account of stock and show a little common sense in the matter. Our great stumbling block is in our inability to diagnose with any degree of accuracy the state of focal infection. There is no test or known symptom complex which enables us to determine whether or not we have focal infection. The various blood tests up to date are far from conclusive. In the early case, with or without other known etiology, I am heartily in accord with extirpation of all known foci of infection but with the advanced case presenting a high diastolic blood pressure, particularly where heart and kidneys are damaged, routine removal of teeth and tonsils offers no hope of relief. Certainly I have never observed any resultant good. To me, such radical treatment seems both futile and deplorable.

A patient of mine, presenting the most advanced form of the disease, failing to obtain any encouraging results from me, drifted over to one of the large Philadelphia hospitals where his teeth and tonsils were removed. As was to be expected there was no improvement. In fact, he grew rapidly much worse and about a month later died. Such radical measures in an incurable case are without result and are absolutely unjustifiable. However, with the early case, where focal infection is the etiologic factor, eradication of the focus will be productive of results, as illustrated by the following case:

Mrs. R., a patient of mine for 12 years, with a blood pressure known to be normal up to 1917. Upon my return from service in the army the patient came back to me with a new complex of symptoms, including blood pressure 190/100, in September, 1920. There were found many extensively diseased teeth which, after several months of persuasion, were removed. In July, 1921, the patient had gained weight, was feeling much improved and B. P. was 130/100. In October, 1921, B. P. was 130/90. In October, 1923, B. P. had dropped to 120/75 and has continued thereabouts ever since.

I have had a number of equally happy results from extraction of abscessed teeth but it has never been my fortune to obtain marked relief of a hypertension following tonsilectomy. Summing up the matter, it appears certain that focal infection plays a real part in the production of hypertension but that unless early removal is obtained no results need be expected from radical means, even though the tissues removed many have been originally the etio-logic factor.

(4) Nervous tension as a cause of high blood pressure is alluded to by Martinat in what he speaks of as the "Neurohemic" type. Whether nervous tension ever is the sole cause of hypertension is very much a question but it cannot be denied a rôle as, at least, a contributory factory. Many times in the business and professional man working under great nervous and mental strain elevation of blood pressure is encountered without other discoverable etio-logic factors. The high rate of incidence of various types of arterial disease among members of our own profession is in itself suggestive. Knowing that all violent emotions produce elevation of blood pressure it seems reasonable enough to assume that long protracted strain and the perpetual high nervous tension of modern business life, when continued over a long period of time, may eventually produce arterial damage. At any rate the laity is discovering for itself the value of relaxation through Y. M. C. A. and golf links.

(5) Plethora, overfeeding and overweight constitute one of the most clear cut of our known causes of hypertension. A hundred thousand years or so ago when man was roaming the field and forest, in order to maintain life, he was forced to consume an enormous amount of scantily nutritious food; today the healthy human still demands a large bulk of nourishment which, in too many cases, is of the most nutritious type. With the corresponding reduction in physical effort the result is obvious. Roughly estimating the diet of some of these cases, I have found many of them to range from 5000 to even 7000 calories per diem. This enormous intake of food,

by raising blood viscosity, ultimately leads to elevation of blood pressure and subsequent arterial damage. There are many tomb stones dedicated to this fact. The following case will illustrate the point:

Mr. G., age 60, came for treatment of what she called rheumatism in January, 1923. Weight 240 lb. B. P. 208/100. Rheumatism was judged to be result of excessive strain of overweight on her legs and cardiovascular overstrain. She was put on reduction diet and given thyroid extract 65 mg. b.d. The following results were charted:

	Wt.	B. P.
Feb.	233	185/80
Mar.	225	165/90
July	207 ½	156/84
Aug.	204	130/70
Sept.	199 ½	125/75
June (1924)	215	165/90
(following break in diet)		
July	204	130/70
May (1925)	205	148/90

Shortly after beginning to lose weight the rheumatic symptoms began to abate.

While regulation of diet is the essential requirement in these cases, the moderate use of thyroid extract in certain individuals is of value. It was probably due to this type of case that a few years back some men were advising the routine use of thyroid extract in all cases of hypertension.

(6) Menopause, per se, is not a cause of rising blood pressure but I am giving it a place in etiology because of that very distinct type of case which has its origin at or during the time of the menopause. This group is really a combination of several types. The tendency for rapid increase of weight during this period, the heightened neurohemic irritability and the frequent association of subovarian and subthyroid function all play a part. Any of these 3 factors may cause elevation of blood pressure and the combination gives rise to a very high percentage of hypertension among our menopause patients. It may be that the subfunction of ovary and thyroid exert their influence, indirectly, through rapid increase in weight. However, I have found the routine use of corpus luteum, administered hypodermatically with, sometimes, the use of thyroid extract, very valuable adjuncts to the dietary measures.

(7) Essential hypertension does not really deserve a place in etiology since it is, itself, spoken of as a disease. Further it



has no established cause. I am placing it here, in truth, for the purpose of raising the question as to whether there is such a condition. Is it not possible or rather probable that we apply this term to such cases as we have been unable to pigeon hole etiologically? I wish to cite a case that suggests this thought.

Mrs. L. came to the University Hospital clinic presenting what appeared to be a clear cut case of essential hypertension. In past history she stated that she had never had any disease. It was found that some 12 years before she had been treated at the same dispensary for what condition she did not know. Her old record was found, and brought to light the fact that in 1912 she had been treated for a subacute nephritis. At the present time the urinary findings are negative except for traces of albumen and occasional hyalin casts. Renal function gives a total of 40% and blood urea nitrogen is normal. With our old record we feel justified in assuming this case to have resulted from the old nephritis.

The frequency with which we find very high blood pressure readings in this group of cases is additional reason for making one wonder whether, after all, most of our essential hypertension do not go back, in reality, to some kidney condition in the past.

Diabetes has by some been attributed recently to hypertension. This has not been borne out by our findings. In the series of 100 cases, above mentioned, sugar has been found in the urine in about 2% and these were either true diabetes or cases of simple alimentary glycosuria readily corrected by diet. Routine blood sugar recently taken on 15 cases of hypertension gave normal results. Further, treatment of our diabetics showing elevation of blood pressure has resulted, almost uniformly, in fall of blood pressure so that we are back to the old idea that glycosuria, through kidney irritation, may give rise to nephritis and ultimately arterial disease.

In summing up we arrive at the following conclusions:

(1) Regardless of our imperfect understanding of this subject, it seems definite that the symptom hypertension is a sure indication of something gone wrong in the human economy and should be given the most careful attention.

(2) There is little chance of curing a hypertension of long duration, especially

where the diastolic pressure has risen above 100, for the reason that organic changes have occurred.

(3) In order to accomplish anything with hypertension we must get our cases early, when, if the etiologic factor can be ascertained, cure or at least alleviation can be attained.

(4) Diabetes and glycosuria are not, as a rule, caused by hypertension but rather, when of long duration, they are etiologic factors in the development of hypertension.

(5) Essential hypertension as a distinct entity is doubtful. It seems rather more likely that it is the result of a preëxisting nephritis.

(6) While much is yet to be learned about the causes and the *modus operandi* in the development of hypertension, yet, the following conditions are of sufficiently definite etiologic significance to be of practical value: (a) Toxemias and infections. (b) Chronic nephritis. (c) Focal infection. (d) Nervous tension. (e) Plethora, overfeeding and overweight. (f) Menopause.

#### DISCUSSION.

**Dr. Otto Lowy:** Dr. Lewis makes a somewhat ambiguous statement in reference to focal infection. He says that at the present time we have no means of determining focal infections in the blood, but later on, he says that teeth and tonsils are removed indiscriminately, and then quotes a case in which a cure was affected by the removal of the infected parts, without stating how he arrived at the conclusion that the infection arose from this particular spot.

I should like to reiterate that Drs. Cotton, Twinch and myself emphasized the fact that focal infection may cause an enormous amount of trouble by changing the biologic aspect of the blood and thereby causing toxins to circulate, which may give rise almost to any symptom and particularly hypertension. I believe I brought out the fact yesterday that we are now able to determine definitely, or as nearly definitely as any biologic reaction can be made, that we can identify an offending organism.

The Doctor is perfectly right when he states that the removal of the teeth and tonsils do not always relieve the symptoms, even after the removal or clearing out of affected parts. Some of the microorganisms may remain and cause trouble.

I, therefore, feel that the removal of the infected organs, the isolation of the offending organisms, the preparation and use of proper vaccines are always indicated.

**Dr. Lewis:** On the question of focal infections I think that we agree entirely. The point that I wished to make was simply the fact that the procedure which has been in vogue, of radical removal in the cases of badly advanced lesions, offers

very little hope for alleviation of symptoms. The patient himself is a poor risk. I have known of several cases of death following tonsillectomy in such cases as this, and I have never observed any cures. I agree that in a moderate case of hypertension, in an early case of hypertension, in one in which there is no great amount of organic change, that every possible focus of infection should be eliminated, and I also agree with the follow-up by the use of vaccines in such cases. The point simply was to bring out the inadvisability in our advanced cases, of those radical procedures, which can do no good because the cases have gone beyond repair.

As for blood chemistry, in showing up the question of focal infection given a case of hypertension, it is indeed a difficult problem to ascertain the etiologic factor. We know that the focal infection is not the only cause, and it is mighty difficult, to my way of thinking, to establish whether or not we have focal infection. I repeat what I stated before, that I think most of the methods of examinations by laboratories, in their attempt to establish focal infection as an entity, are not very conclusive.

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## TRIGEMINAL NEURALGIA AND ITS TREATMENT.

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Though *tic douloureux* has been recognized as a distinct clinical entity for more than 120 years, its etiology remains obscure and its pathology undetermined. The paroxysmal character of the sharp, lancinating facial pain is so characteristic of this distressing malady that there is usually but little difficulty in making a positive diagnosis based alone upon the patient's description of the pain.

There are, however, several painful affections involving the trigeminal area which are not typical paroxysmal trigeminal neuralgias and which must be carefully differentiated from the true case. It is not uncommon to find in the course of a migraine that most of the pain is located in the trigeminal area, often in the region of the first division, but there should be no difficulty in differentiating an attack of migraine, which is periodic in its recurrence and usually having a gradual onset, increasing in severity, reaching a climax, and fading away after a period of pain and discomfort lasting 12 to 48 hours. The pain of

migraine, commonly known as "periodic sick headache", is usually dull rather than sharp, and described as throbbing. The facial pain that occurs in disease of the accessory sinuses, in sphenopalatine neuralgia, and various other disorders of the face, gums and teeth, may suggest trigeminal neuralgia, but a careful consideration of the pain characteristics will usually serve to differentiate definitely the atypical form of facial pain from that of the typical trigeminal neuralgia.

The pain of paroxysmal trigeminal neuralgia is severe and essentially short; it is distinctly paroxysmal in character, striking the patient without warning. A paroxysm usually lasts a few seconds and rarely longer than a few minutes. It is characterized by patients as being excruciating, as though the face were being penetrated by a "hot iron," or "jagged lightning." It is commonly described as burning, boring, cutting, piercing, like the touching of an exposed nerve of a tooth. While a single paroxysm lasts usually but a few seconds, frequent repetition of these shocks may occur during an attack. The attacks of trigeminal neuralgia may be separated by an interval of months or even years. Occasionally an attack may last for a few days or weeks, after which the neuralgic pains may not again be felt for a period of weeks or months. Often, however, there is but little intermission between attacks, and the patient has a series of daily paroxysms for months, and occasionally we have patients apply for relief who have had these excruciating paroxysms of pain occurring daily, or many times each day, for years.

The course of a paroxysmal trigeminal neuralgia is essentially chronic. The disease, at first usually limited to a single division of the trigeminal nerve, tends toward a progressive involvement of other branches. The pain is usually referred to the periphery, and commonly involves the angle of the mouth, the upper or lower lip, or the ala of the nose. In these areas, the touching of the skin is often sufficient to induce a paroxysm of pain, and hence they have been termed by Patrick "dolorogenetic zones." Occasionally such a zone may be



located in the tongue, in the buccal membrane, or in a single tooth. In many patients, any irritation of dolorogenetic zone will produce a characteristic paroxysmal pain, and a patient with true trigeminal neuralgia is usually very reluctant in permitting the examiner to touch this zone, for fear of precipitating an attack. These patients live in almost constant dread of inducing an attack, which may be instigated by washing the face, shaving or stroking the beard, drinking cold liquids, and occasionally even the taking of food.

More than 70% of patients reporting for treatment have had all their teeth extracted from the affected side. Many have been mutilated by ill-advised operations on their sinuses and gums by physicians and dentists who fail to appreciate the clinical aspects of the affliction. I have never seen a case of true paroxysmal trigeminal neuralgia relieved by any operation upon the teeth or sinuses, nor is the condition influenced by the use of medication. The only hope of relief in typical cases lies in the surgery of the trigeminal tract.

The surgical procedures in general use consist in: alcoholic injections of the terminal branches or the gasserian ganglion; either division or avulsion of the peripheral branches of the trigeminal trunk, or the posterior root of the ganglion. While alcoholic injections of the supra-orbital, infra-orbital, and third division of the trigeminal nerve, when successfully accomplished, may give relief for 1 or 2 years, and occasionally longer (though rarely so), the procedure must be repeated with less satisfactory results. It is only in exceptional cases that the relief obtained by alcoholic injections is permanent, and sooner or later the unhappy victim is driven to seek relief through the more radical operation of division of the sensory root of the ganglion. Peripheral operations upon branches of the trigeminal nerve give relief only until nerve regeneration takes place, after which the patient is again subjected to the tortures of the attack. Attempts at alcoholic injection of the ganglion through the foramen rotundum are successful in about one-third of cases, but the relief here is usually only transient; and

the injection is so commonly fraught with serious complications that it is being largely abandoned in favor of root division.

The division of the sensory portion of the posterior root of the gasserian ganglion is by all means the operation of choice. With experience and perfection of technic, the mortality of this procedure has been reduced to less than 0.5%, and by this procedure in typical cases we can promise a complete and permanent relief of pain. In our experience, patients so treated regret their wasted time in trying to procure permanent relief from alcoholic injections and peripheral resections. Even in the aged and those afflicted with cardiac or renal disease to an extent contraindicating general anesthesia, division of the posterior root can be very satisfactorily accomplished under local anesthesia; in fact, in the majority of instances we find that under local anesthesia and with the patient in a sitting posture, the complete operation may be effected in less than an hour, entirely without pain, with a minimum loss of blood and totally without shock. In patients who are very nervous and do not wish to be operated on without being put to sleep, it is our practice to use rectal oil-ether anesthesia, which makes the patient drowsy or induces light sleep; the operation is then done under local analgesia. With this method of anesthesia, the marked venous oozing so commonly encountered in gasserian work resulting from the cerebral congestion of an inhalation anesthesia, is largely eliminated, and it is possible to complete the operation in a much shorter time—often our local anesthesia cases are completed in less than 45 minutes.

The surgical treatment of trigeminal neuralgia, whether it be alcoholic injection, avulsion, or resection of the posterior root, invariably results in a cutaneous anesthesia of the affected side. Unless this anesthesia is produced, the beneficial effects of the treatment are not experienced. To the patient the operation resolves itself into an acceptance of cutaneous anesthesia for loss of pain. The numbness of the anesthetic region of the face annoys some patients until they become accustomed to its pres-



ence. Usually a few months is sufficient, and patients with true paroxysmal trigeminal neuralgia are always grateful to exchange their pain for an anesthesia.

With the perfection of the technic of posterior root division, it seemed that the question of trigeminal neuralgia was solved, yet experience has proved that even this procedure might be refined by preserving the motor root of the trigeminus, which may in most instances be satisfactorily isolated—thereby preserving the function of the masseter, temporal and pterygoid muscles of that side. This is of particular importance in those rare cases in which the patient is the unhappy victim of a bilateral trigeminal neuralgia.

In a small percentage of cases, trophic disturbances in the cornea occur, and after all due precautions we have observed minor corneal abrasions in about 4%, though less than 1% have actually developed corneal opacities. Spiller and Frazier have pointed out that in the posterior root of the ganglion the fiber bundles are arranged in groups, corresponding in function to the terminal divisions of the trigeminus, and that it is possible to divide the outer two-thirds of the posterior root and preserve sensation in the cornea and the first division of the nerve. Inasmuch as the majority of cases of trigeminal neuralgia are limited to the second and third divisions, this subtotal resection of the posterior root seems to completely relieve the neuralgia and at the same time preserves corneal sensation, thereby preserving the possibility of corneal trophic changes. In doing this operation under local anesthesia, we have repeatedly demonstrated the feasibility of this procedure by dividing a portion of the root, and having the coöperation of the patient, we have been able to determine the exact location of the anesthesia produced. In dividing the bundles of the trigeminal root from without inward, division of the first bundles produces an anesthesia of the chin and lower lip; with the progressive division of bundles medially, the area of anesthesia is raised until the eye is approached, thus demonstrating clearly the position of the bundles in relation to the ganglion and its peripheral

divisions. In those patients who suffer from involvement of the first and second division of the trigeminus, it seems advisable to divide the entire root, making no attempt to preserve corneal sensation.

While in typical cases of paroxysmal trigeminal neuralgia, the relief obtained from division of the sensory root of the ganglion is certain and permanent, this procedure does not serve to relieve other disorders in which pain is expressed in the trigeminal area, and it is the experience of most neurologic surgeons to have operated on certain atypical cases which were not true paroxysmal trigeminal neuralgias, and failed to relieve the pain. These unfortunate experiences with atypical cases have been exceedingly helpful in the clinical identification of types, though in some instances we may still have difficulty in differentiating certain forms of facial pain which more or less simulate the typical clinical expression of the malady. Any type of facial pain which crosses the middle of the face or radiates beyond the trigeminal area, or which is attended with objective symptoms such as anesthesia or facial paralysis, and most cases in which a paroxysm lasts longer than a few minutes, should be considered as doubtful, even though the pain appears to be largely confined to a definite trigeminal area. Midfacial neuralgias of the sphenopalatine type may occasionally bear some of the characteristics of trigeminal afflictions, but they may be differentiated in that they are relieved by anesthetizing the mucous membrane of the nose in the posterior middle turbinate region. Tumors of the posterior fossa and of the gasserian ganglion rarely give typical attacks and are invariably associated with more or less organic disturbance with objective signs which immediately suggests the nature of the lesion. Attacks of migraine are commonly confused with trigeminal neuralgia, and are to be differentiated by their regular periodicity, the length of the attack, and the throbbing nature of the pain, which progressively increases and decreases. Various other disturbances giving pain in the trigeminal area are little understood and can be but indefinitely classified at the present

time; certain of these are undoubtedly due to disturbance of the sympathetic system. We have seen 2 instances of painful affections of the face, upon which the posterior root of the trigeminus had been previously divided, yet the patient continued to have a more or less constant burning pain in the anesthetic area. Both of these cases were eventually entirely relieved through resection of the superior cervical sympathetic ganglion and a decortication of the internal carotid artery.

When there is doubt regarding the nature of a facial neuralgia, particularly if it involves the area of the second or third trigeminal division, the diagnosis might be helped by alcoholic injections of these divisions at the foramen rotundum or ovale. If there follows a complete anesthesia in the cutaneous area of the branch injected and the neuralgia is entirely relieved and remains relieved as long as the anesthesia persists, the condition can be reasonably considered as being a true trigeminal neuralgia. When, however, the pain persists in the anesthetized area after an alcoholic injection, the surgeon may conclude that the case is not a trigeminal affair.

Reiteration of salient points:

(1) Typical paroxysmal trigeminal neuralgia is a disease characterized by a distinctive symptomatology, which is not to be confused with other expressions of facial pain occurring in the trigeminal area.

(2) Paroxysmal trigeminal neuralgia is never cured by the use of drugs, operations upon the sinuses or teeth, and in most instances is but temporarily relieved by alcoholic injections and operations upon the peripheral branches of the ganglion.

(3) Typical cases of trigeminal neuralgia are completely and permanently relieved by dividing the posterior root of the gasserian ganglion, which can be safely and easily accomplished under local anesthesia by an experienced neurosurgeon.

(4) In obtaining relief for trigeminal neuralgia, the patient gratefully exchanges his paroxysmal pain for a permanent cutaneous anesthesia of the affected side of the face, nose, mouth and tongue, to which

he usually becomes adjusted in a relatively short time.

(5) In most instances, it is possible to preserve the motor root, thereby retaining function in the masseter, temporal and pterygoid muscles of the affected side.

(6) Under local anesthesia, it is quite a simple procedure to resect bundles of the posterior root of the ganglion progressively from without inward, raising the level of the anesthesia from the chin upward until the lower eyelid is reached, preserving corneal sensation. It is also possible, beginning on the medial aspect of the root to progressively resect the fibers outwardly, lowering the area of forehead anesthesia until the upper eyelid is reached, thereby affecting an almost complete division of the posterior root, retaining only those fibers subserving corneal sensation.

(7) Subtotal resections of the posterior root give very satisfactory results, when anesthesia is produced over the second and third divisions of the nerve, preserving corneal sensation, which when sacrificed, subjects the patient, in a small percentage of cases, to certain trophic disturbances which occasionally lead to permanent corneal opacities.

(8) A certain type of pain in the trigeminal area, characterized by a more or less continual burning sensation, is relieved by resection of the cervical sympathetic.

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## THE ETHICAL PRACTICE OF MEDICINE.

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(Presidential Address to the Burlington County Medical Society, October, 1925.)

I suppose I am perfectly safe in saying that there has been no other subject so frequently discussed and written about among medical men as medical ethics. I therefore fully realize that much that I may have to say is "old stuff"; in fact, there is really little new under the sun.

I am going to chance trying your patience, in the hope that I may say something that will stir our thoughts, so that all of us may have a part in lifting human ideals to a little loftier plane than we have found them. One of the difficulties about the consideration of this subject is that frequently men will not discuss it in a broad, impersonal way. Rather they will write it *at* someone, when much that they may have in mind for the other fellow could be well taken home.

Some years ago I attended one of our county meetings. It happened to be on a warm afternoon in June, the time of year when we can sometimes permit ourselves to relax a little. We sat over our dinner a little longer than usual, many enjoying the opportunity for a little visit. I happened to be sitting near 2 men who had grown old, and perhaps a little weary, in the harness. Both have gone on since. They were discussing the question of medical ethics in a general way. I was so impressed with their conversation, much of it bitter, that I then and there took a solemn vow that should I ever attempt to outline a code of ethics, or talk on this subject, it would be when I was in the prime of life, and at a period in my practice when no one, much less myself, could believe that my thoughts were swayed or influenced by passion of any kind. In a way, this is my explanation for the topic of today.

I want you to believe this is a frank and honest discussion of a troublesome subject. Physicians have always more or less prided themselves that they belonged to a profession where an attempt was made to observe certain moral regulations in practice and conduct. We have an illustrious history behind us. We are all familiar with Hippocrates and his oath; also "The Law of Hippocrates". You will remember that he was a celebrated Greek physician, born on the Island of Cos about 460 B. C. He belonged to a family that claimed descent from the mythical Aesculapius, son of Apollo. You will remember that there was a long medical tradition in Greece before his day, which he is supposed to have inherited chiefly from Herodicus. He also enlarged his

medical training or experience through travel. The writings which are attributed to Hippocrates are the earliest extant Greek medical writings. The famous "Oath" is among these. This document shows that in his time physicians were already organized into a sort of guild, with regulations for training of followers, and with a professional ideal which, with slight exception, can hardly yet be regarded as out-of-date.

One saying of his has achieved universal quotation: "Life is short, and the Art long; the occasion fleeting; experience fallacious, and judgment difficult. The physician must not only be prepared to do right himself, but also to make the patient, the attendants, and externals coöperate". He also says in his "Law" that "medicine is of all the arts the most noble". Also, "that whoever is to acquire a competent knowledge of medicine ought to be possessed of the following advantages: Natural talent, love of labor and perseverance, and the advantage of early instruction and experience". Certainly all this advice written hundreds of years ago applies today.

I presume that all of you have had some college instruction in medical ethics. As I see it, much of this instruction is useless because it is not practical. There are often so many fanciful ideals and ideas advanced that the poor student is lost in a maze of uncertainty. I remember my own course, running through parts of 2 years. It was under the direction of a dear old doctor who was just getting out of practice. I remember he gave us a lot of advice about our relation to one another and to the public at large. He frequently would distribute cards bearing beautiful sentiments in poetry or verse, and try to interest us in each other's birthdays and in each other. While I enjoyed all of this, for it afforded relief from what then seemed more serious work, yet I confess I wondered what it was all about. Now, in the light of later years and some little experience, I can see what our friend was driving at. He knew, as I now know, that his mission was accomplished largely if he succeeded in pointing out the principles of life, the value of a



love for humanity, and the importance of friendship, for when we realize these, the ethical practice of medicine will naturally follow. We should know a great deal of life, yet life is something difficult to understand and define. You see trees and plants at certain seasons of the year that have the appearance of being dead, yet we know there is a mysterious something—life—ready to reappear when the proper outward conditions present themselves. You can put this life to any laboratory test or analysis you choose, yet the immaterial principle escapes you. It is not perceptible to the senses or to any physical test. Life, then, is an immaterial principle. There is, of course, great difference between plant and animal life. Animal life is a higher form. The principle we call life in the animal gives it more freedom. It has senses, intelligence and wonderful instincts, and requires a greater variety of food. As you go up the scale of life you discover the higher the form of life the more help—external help—is required for fullest development. Man, the highest form, requires the most. If man would be more than a mere animal, and would live the life that he should live, he needs education, knowledge, culture, affection, love, society, work, recreation and even solitude.

Man is more than body—he has a soul. The fact that he has a soul makes him different from the animal.

The physical part of man requires food, requires rest, requires some kind of work. We all have these; barring unnatural conditions, these are readily obtainable. The soul, part of man that makes life more than mere existence, gives him convictions, interests, and a sense of progress and accomplishment. So we must make the soul alive to know that we really live. The soul requires food to attain its highest development.

What are some of the things that our natures react to? Nature herself is one of the first things that appeals to the best in every one of us. Some years ago, on an ocean trip, I awoke one morning just as the ship came to anchor in the harbor at Kingston, Jamaica. It was just at daybreak; the

sun was peeping over the horizon, and as its rays fell across the rugged mountains and the little town of Kingston which lay at its foothills, and flashed out across the waters to the porthole through which I was looking, I was most deeply impressed with the sublime beauty of the beginning of a new day in the tropics. But I have often thought since then, it is really not necessary to visit places like these. Nature, for pure beauty and grandeur, seems to have blessed all—in the little, drab country town as well as crowded city. The beauty of sunrise and sunset is free to all who will only see.

Another thing that a man reacts to is society. We gather here today, each of us different in some respect, in creed, culture, disposition; yet it is this variety that we really need. No one can really live to himself, and it has been said that "he who has the widest range of human sympathy receives back the largest measure of life". You give and it is given back to you. We react to love and affection. Those who love really give life to each other. You may have the finest home, all that life can give or that money will buy, but these things alone soon wear out, and unless there be love there isn't lasting happiness.

Another thing we react to is knowledge or truth. Only through knowledge are we often able to arrive at great truths. Science at the present time is busy checking up the past through the discovery recently of one of the Pharaohs' Tombs, and other wonders of past ages. Three thousand or more years seem a long time, yet science is able, through the study of the glaciers of Greenland, Switzerland, and other parts of the world, to estimate past epochs in enormous periods of time covering many thousands of years. We sometimes ask ourselves what progress we have made in the last several thousand years, in the light of certain discoveries. We are fond of talking about our present modern civilization. A man does not take all his worldly wealth with him at death these days. Rather he is more interested in making life a little easier for those coming on.

We react to noble friendship and goodness. The kind of friendships that are

worth-while are those which come about through giving. We must learn how to give as well as receive. We depend upon our friends for advice, and really for life itself. After all, only through the lives we lead will our real living be determined. Probably every man, at the outset of his career, has a more or less definite goal toward which he is working. Possibly the goal we have set for ourselves is attained, and possibly it remains seemingly beyond our reach. If, by good fortune, we do attain an early ambition, how often is that accomplishment not self-satisfying? In our selfish effort, we have so often forgotten to give. So, today I am going to try to show you a few ways in which we might better serve society and ourselves, and make our organization really worth-while. As humble as my suggestions are, they are worthy of considerable thought. Many of you are doubtless familiar with and may be members of the so-called service organizations that have sprung up in the past few years. The Rotarian movement which is now world-wide was the first. Others are the Kiwanis, Lions, etc. All of these organizations have found it necessary to have a code of ethics, and it is largely due to the efforts of these clubs that men in all walks of life are coming to know the value and begin the practice of ethical standards of business.

In suggesting certain general principles that might be embodied in a physician's code, I would be naturally somewhat influenced by my familiarity with the Rotary Code. Our standards must have in them, perhaps more than any other class, a note of sympathy for humanity in general. All of our responsibilities must be discharged to the very best of our ability. We must remember that our vocation is most worthy, and that we have a distinct opportunity to serve society. We can well remember a cardinal principle—"He profits most who serves the best". It is perfectly all right to be a business man, but be ethical; be just and moral in your success. Service and ideas have a value. Profit is legitimate—but always try to give better service. We should all use our best endeavor to elevate

the standards of our profession, and to so conduct our affairs that others will find it wise to emulate our example. Make a big effort to cultivate friendships. Learn never to abuse friendships. Do not take an unfair advantage of anyone. Membership in any society should not be used as an excuse by other members for special favors. Finally, the Golden Rule: "All things whatsoever ye would that men should do unto you, do ye even so unto them".

Now, to be a little more specific. A man in the practice of medicine should be very careful about his appearance and his habits, because he is in close contact at all times with exacting people. I think the majority of people appreciate promptness in rendering bills. Certainly it will be easier to rectify any possible errors while the service is still fresh in mind. Night work is a bugaboo to most all physicians, but I believe if all physicians would coöperate, it would be possible to cut this work to a minimum. Try to educate people to call as soon as symptoms of illness occur, and instruct them in the use of simple, safe remedies. However, remember that every conscientious physician will have to either do some night work or arrange for someone else to do it. Make a great effort to keep office hours regularly, and if possible, arrange to have a regular night off weekly, and have the general public know about this night.

The new man in a community is often a problem. Be kind and considerate toward the new man, and even though he gets all your practice (for you know nearly all new ones do that) be patient, and after awhile the new man will realize, from your example, that there will be great advantage to all in working together. In Mt. Holly, I think most of the active men have found it to be of great advantage to have an occasional meeting at each other's homes. We become better acquainted, and learn of each other's problems, and if we have difficulties and misunderstandings, instead of talking about them with outside people or other physicians, we talk over these matters with the ones directly concerned, and usually all is amicably settled.



I think the usual practice of doing others' work and turning over all fees is a mistake. We in Mt. Holly are glad to do the other fellow's work, but as long as we do the work we also receive the pay. That practice saves misunderstanding and makes us likely to render better service. We, of course, follow the practice of turning the patient back to the family physician. We think that all charges should be uniform, and feel that when one is too poor to pay the regular fee, it is better to accept nothing, and make it straight charity. This applies to general work, surgery of course the exception, because here it is difficult to regulate fees, and anyway they are usually low enough.

I feel that all men should be honest in reporting contagious diseases. It is bad practice to try to save a family the inconvenience of a quarantine.

In the matter of abortion, which is always an annoying thing, the safe rule is to steer clear of these cases, and try to render honest and sensible advice. Where a therapeutic abortion is deemed necessary, the safest thing is to have a consultant, and have the parties to the arrangement sign a statement for your protection.

I believe that all men should take an interest in public health matters, and help instruct the public along these lines in your daily round of work. Also back up the health officer as far as you are able.

Many men are now complaining about the advertising campaigns which the osteopaths and chiropractors are conducting, and wondering what we can do to offset the effect of much of their pernicious work. I have made it a rule, personally, to ignore these practitioners because I realize I have nothing in common with them. Certainly we should never deign to consult with them, for what could we consult about? However, I believe it is wise practice to ignore them completely, and not knock, because even though you may be honest in your convictions, many of the public would misunderstand you. I believe that we, if we have confidence in our superior training and knowledge, should let the public know in a

modest way the real efforts we are making to solve the problems of disease. I think it is certainly an admirable plan to educate the public to the value and importance of a thorough and honest occasional complete examination. The right kind of propaganda will certainly be of value to our profession, and I think it might be well to call your attention to the value of conducting our work upon a businesslike basis.

We might divide our patients into many classes, but I think the general practitioner will agree with me that there are, roughly 3 large groups of clients. The first group we might term the "regulars", who have known you and had you a number of years. The second class are "regulars" too, but in a different way. This class probably have you because they think you are modern and active, and can give them the best service obtainable. The third class are the "floaters", those who are constantly switching around from one physician to another, for one or another of many reasons. No matter how long a man may practice, he will probably retain the first group, but as he gets past middle life he may have difficulty in retaining the very large second class, and he will likely not care much about the third class. Then, as a man grows older and begins to lose his snap and hustle, his work naturally falls off, so I think it very wise to think about this, particularly at the outset of one's career, and "make hay while the sun shines". The saddest thing, to me, is to see a man in medicine forced to work hard and hustle up to the time of his last breath. In our profession particularly, we should begin early to lay the foundation for a comfortable and easy old age. We have all seen men who have devoted their entire time—their very life itself—to their work, who come to their end almost totally unnoticed, and their memory soon forgotten. The world loves what it chooses to call a success. There is a simple lesson in this for all of us. How fine it would be to be able to slacken up while we are still possessed of our mental faculties, and before we have gone down the hill too far physically.



## Medical Ethics

In the Principles of Medical Ethics, as adopted by the American Medical Association, Section 1 of Chapter 1 is devoted to a consideration of "The Physician's Responsibility", and the first sentence reads as follows: "A Profession has for its prime object the service it can render to humanity; reward or financial gain should be a subordinate consideration." As a clear, concise definition of our aims and objections, we members of the medical profession have, with a great deal of pride, accepted that sentence as perfectly expressing our ideals. Since the days of Hippocrates we have collectively and separately affirmed that principle as the fundamental, basic factor upon which our standards rest. To live up to that elemental factor of our code has been and remains the crowning glory of our achievements.

Service to humanity is a phrase that may cover a variety and a multitude of things; there are many kinds of service to be rendered and many different forms in which a given service may be performed, even within our limited professional field. Naturally, for us, service relates primarily to the preservation of health and prolongation of the lives of those who entrust themselves to our care or guidance. Until comparatively recent times, the service we have been mainly expected to render has been in the line of healing the sick or of rendering aid to those who had been injured or had become ill through some unfortunate chain of circumstances. Preventive medicine is by no means a new factor in our lives, and the organized profession has rendered invaluable service to humanity in the way of scientific discoveries, in the application of such findings to the prevention or elimination of diseases, and in the dissemination of knowledge designed to educate individuals in the art of self preservation.

It is only recently, however, that we have come to realize how much more we might be doing for the benefit of humanity, and one of the great forward movements of the period is that which has for its object the raising of the average duration of life, and which is today receiving so much support from the leaders of the medical profession. It is not to be expected that every member of an organization shall be in the vanguard of the procession, there is not room at the front for all, but there are beginning to be complaints, from all parts of the country, that "the medical men, generally, have not taken sufficient interest in the proposal to have every individual undergo a physical examination at least once a year for the purpose of securing an inventory of health conditions and obtaining advice and suggestions for prolonging health." Apparently, all

physicians approve of this great effort to help man to help himself, this movement to educate the people into keeping well and avoiding sickness and delaying as long as possible the inevitable death, but many of them are too much inclined to leave the educational labor to a few members and are far too neglectful of their wonderful opportunities for personal service. Aside from their obligation to render service to humanity in whatsoever manner may prove feasible, we would respectfully call the attention of those who have not yet awakened to the importance of this new field of labor to the fact that while "reward or financial gain should be a subordinate consideration", these desirable compensations for service go in greatest abundance to those who recognize their responsibilities and obligations and probably in least satisfactory form to those who fail to meet their duties and opportunities.

We quite agree with the Editor of the Missouri Medical Journal, who recently said on this subject: "If we read the signs aright, periodic health examination will become a routine in the life of every person who takes thought of his own welfare, and it is the physician who must make this examination. It is, therefore, the duty of every physician to familiarize himself with the development of this movement and prepare himself to perform this function as a part of his regular everyday practice."

We are entering upon a new year, a new era of promise and of hope, and we are, possibly, "turning a new leaf", or at least giving some thought to our course of action for the immediate future. Each of us desires to profit by the experiences of the past and to plan better for the future, and there appeared in the New York Times on New Year's Day a poem that seemed particularly worthy of a moments consideration on the part of physicians:

### A BABE OF PROMISE.

(Poem by Allen Johnson)

Another year of hopes and fears,  
Another year of smiles and tears,  
Another year from all our years,  
Last night stole soft away,  
Whate'er of good, whate'er of ill  
It brought, or ache, or peace, or thrill,  
Means little now save as it will  
Prove guidance for today.

Time pauses not. Relentless? Nay,  
His touch is tender; day by day  
He leads us gently down the way  
Unto the journey's end.  
As bends the form youth bore upright,  
Time dims youth's vision 'gainst the blight,  
As afterglows to falling night  
Their masks of beauty lend.

\* \* \* \* \*

Hail then with joy the New Year's birth—  
A Babe of Promise born to Earth—  
A year worth what we make it worth,  
A joy, or pain-to-be.  
Proud sire of a new-born year,  
Time swings his service portals clear,  
Beyond which love and hope appear,  
And opportunity.

# JOURNAL OF THE MEDICAL SOCIETY OF NEW JERSEY

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## New Year's Greeting.

from

The President of the Medical Society  
of New Jersey.

We now are entering the second quarter of the twentieth century. Medicine and surgery have made more progress during the last 25 years, toward the prevention of disease and the prolongation of life, than in almost 2500 years before. This being true, we must keep up with the procession and carry on the good work. My visits to County Medical Society meetings have shown me that the thoroughly scientific and practical programs which are presented, encourage attendance. I congratulate the officers. Let us keep it up.

Osler used to say that a man who did not make a determined effort to keep up with medical progress, would in 5 years drop 10 years behind his brother physicians. We need more interest in the plans offered at the annual meeting for postgraduate courses. We all have the chance to have these courses come to us, instead of having to go to them. Let us be sure to take advantage of this excellent opportunity to keep up to date.

Physicians have been, some of them, a little slow in properly preparing themselves to make thorough health examinations. Periodic health examinations are the watchword of the hour. They are coming just as surely as the use of the thermometer and the hypodermic syringe came 50 years ago. There was some opposition to those advances; physicians were not ready to learn how to make use of them. It isn't enough to look a man over casually and say he is alright; it is essential that you

demonstrate to him that you *know* he is alright, because his urine, his blood, his blood pressure, his heart, his lungs, his nervous system, and his special senses all provide definite accurate evidence of that fact. If *you* do not do it, someone else will and then your patient will be inclined to think that it was because you *did not know how* to do it that you failed to examine him properly.

I have said that the county societies are doing excellent work in encouraging attendance at their meetings. This is a hopeful sign, for nothing is so beneficial for the prestige of the profession as to have such community of interest. When doctors disagree in public we lose something in the estimation of the laity. These disagreements are often due to trivial personal grievances. Let us bury our rancors and stand together, since that means so much, not only for increased public health, but also for the stabilization of the confidence of the public in our great profession.

May I add one word more with regard to coöperation within the ranks of the profession? Just at the present time one of the most serious drawbacks in the practice of medicine is the number of damage suits that are being brought against physicians. This has become one of the banes of professional life, not only for the physician and surgeon but also for the dentist. In this matter, coöperation, the standing together, is the best mode of protection that we can have. Your State Society now offers the opportunity for *group insurance*, a protection that practically does away with the worry and the loss involved in defending such actions. No physician or surgeon can be assured that he will be



free from such an attack. Some of the best men of the profession have been subjected to the ordeal, and the verdicts rendered against physicians have often been out of all proportion to the compensation received by them for their services, sometimes involving serious hardships, not only on the physician, but on his family as well. This group insurance is an opportunity, at a small investment, for the combining of our efforts in such manner as will do more to prevent abuses and frustrate the machinations of blackmailers than anything else that we could do.

My best wishes for a happy, happy New Year and many of them to you all.

LUCIUS F. DONOHUE.

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### CHANGES IN THE JOURNAL.

Your attention has, of course, been attracted to the new form assumed by the Journal this month. This modification was not made entirely voluntarily, but it became necessary to conform to the size and shape of all the other state journals. The Editor and all members of the Publication Committee recognized the advantages of adhering to the established form and hesitated long before deciding to change, but the arguments in favor of the existing size were outweighed by those demanding the larger page size to accommodate some of the illustrations now used by advertisers. This change will make a decided break in the appearance of your set of bound volumes but we trust no one will find that a serious objection.

We are taking advantage of the opportunity afforded by this change, and by the advent of a new year and commencement of a new volume, to initiate some additional new features. Under the heading of "Current Events" a new department is started for the purpose of presenting reports of progress being made nationally or in other states in dealing with matters of economic interest. The first item in the present number recounts a recent movement looking to closer harmony of action between New Jersey and her neighboring states of New York and Pennsylvania in matters that relate to general professional welfare and where uniform legislation might prove beneficial. The second item reports Dr. Morrison's

efforts to bring about a settlement of the dispute between the New Jersey and Pennsylvania medical licensing boards. The third subject is a communication from Dr. Costill and inaugurates a plan for securing a closer affiliation between the active practitioner of medicine and the state and local boards of health; the State Society's Committee on Public Hygiene and Sanitation, the State Board of Health, and the Editor will endeavor to join forces in submitting material for this special column and in working out certain features of the public educational program.

In this new department we shall from time to time present summaries of the work of the various standing or special committees of the American Medical Association—matter that is often published in special reports or bulletins but does not reach the larger number of members of the profession, or does not reach them in assimilable form.

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### STATE SANITATION.

Special attention is called to an excellent report of the recent annual meeting of the New Jersey State Sanitary Association, published herewith; a feat that was accomplished through the kindly coöperation of the officers of that organization, and particularly through the courtesy of the Chairman of its Publication Committee, Mr. Charles J. Merrell. We were permitted to make adequate abstracts of all the original papers presented at the two-day session and you will find this survey of some of the most important health problems of this state supplies most interesting and instructive reading. Administration problems are dealt with by our own distinguished Commissioner of Labor, by the newly appointed Commissioner of Health for New York City, and by one of the leaders in the U. S. Public Health Service. A very complete symposium on the subject of pollution of public waterways, the possible effect of such pollution on our shell-fish industry, and the steps being taken to protect the latter, is most enlightening. The possibility of eliminating rabies from the community by the vaccination of dogs is ably presented. Altogether, this is an unusually interesting and valuable collection of papers on practical subjects.



## Medical Economics

### ON NOTES AND RECORDS.

Memory is treacherous, and for any man doing work which may need from time to time to be recalled, some system of recording events as they occur is a necessity. This is especially true for the doctor, who deals with a varied assortment of individuals with an almost equally varied assortment of complaints. His contacts are never routine, nor, if he is desirous of progress, will he permit his recommendations to become routine. Note taking and record keeping then becomes a very important part of his day's work. For the young practitioner starting out on his career this is a particularly fertile subject for thought. Despite the apparently obvious truth of the statement a few of the reasons for it may be considered.

In the first place as a pure matter of business method it must be admitted that the patients themselves have a right to expect it. Whether they all do or not, is a question; but they surely have the right, if they wish, to feel that part of what they are paying the doctor for is some kind of record of their symptoms, subjective and objective, and of what is done for them, for such knowledge often may become a very important part of future investigation. Every doctor of 10 or 15 years experience can testify how impossible it often is to secure from a former professional attendant adequate data of surgical or medical observations. Failure in this respect is a frank admission of poor work, and from the patient's viewpoint is a subject of reprehension.

Again, the doctor for his own benefit should desire to keep track of his patients' ailments and the means employed in treatment. How else can he adequately judge, let us say, of the frequency of recurrent colds and change in their character,—to say nothing of learning what forms of treatment are especially successful, or (equally important) unsuccessful?

Only by this method can the physician be aware from year to year of slight changes in a patient's physical condition, and develop early suspicion of deterioration in the subject of middle age. Impressions are too vague to be relied upon, and too often directly misleading. How can any man hope to remember accurately, over a period of months or years, the character of a pulse, the position of the apex, the location of a few râles noted at a former examination, when the intervening months have been filled with all kinds and varieties of other patients and their assorted ills? And yet, some knowledge of such apparently trivial observations of a couple of years ago, may make a great difference in the doctor's estimation of signs or symptoms recorded today.

All of which seems trite enough and what is known as "old stuff"; but, when one comes in contact with a large number of doctors in such way as to obtain inside information as to what they actually do in the way of note taking, it becomes quite obvious that bad habit in this regard is common.

Another use of recording one's observations is the opportunity it gives for study. Information may be acquired by reading text books and magazines, but the actual value of another's experience and ideas is never as great as that derived from one's own actual contacts, be they relatively so few. Any practitioner in the course of 10 years work can acquire material from his own practice, the rereading and mulling over of which, will add more to his store of real medical knowledge than all the text books in Christendom. A few well worked up cases of one's own, with careful notes thereon, are of far more value in stimulating thought and in the actual acquisition of knowledge than the most voluminous reports of work done by others. Such work of one's own serves as an excellent text and incentive to reading; but more than that, facts observed by one's self are for that person truth, and known truth is the most precious thing in the world. Therefore, no false sense of inferiority should be permitted to enter in and suffer one's own observations of fact to be overshadowed by the assertions of others.

In this column last month the subject of research was discussed, and research is impossible without adequate records. The important matter which falls to the general practitioner in this field is the study of early symptoms. No one who keeps careful record of his office patients can fail in the course of a few years to develop some ideas in regard to the beginnings of many chronic conditions of whose incipience only the vaguest notions now exist.

And this leads to consideration of some of the difficulties in record making and keeping. There are systems and systems, but the only one that is good for anything is that one that works for the man who is using it. Any system, in other words, must be adapted by the individual to his own peculiarities of habit and what he knows to be capable of keeping up.

Time is the first factor,—i.e., when to make one's notes; and for the majority of men, that is most surely done if the habit is formed of not allowing the patient to leave the office before notes are made. If a prescription is given to the patient it should not be let out of hand until it has been copied on the record and everything is complete. This takes but little additional time, and the record is made while talking to the patient, and while data are fresh in mind. For most men, it is fatal to wait till night to write up the day's work;

fatigue and unexpected calls are difficult factors to overcome. Recording data of the acute cases seen on visits to the bedside is more difficult. The office file is not handy and something to write on must be carried along. This may be done however—a prescription blank will do—and if an envelope or folder system is used, the collection of papers of a day's rounds can be quickly sorted and distributed at night into their proper containers, and then copied at leisure. The material will be there, even though not in good order. This matter becomes easy where the practitioner can afford an assistant; but as this habit, to be of any value, must be begun in the early years of practice, it must be developed in such a way that the doctor can look after it himself for some years before he has reached affluence and acquired an office nurse.

The second most important factor is habit. This can only be cultivated by making up one's mind to the necessity and then following it up. A couple of years in the early days of practice when time is not quite so precious as later, will serve to ingrain the habit and help to make it a routine part of the doctor's work. But it must become habitual—it must be recognized as part of the job.

A word should be said here as to the relative importance of the daily rounds and the office work. Visits are made to the more or less acutely sick, and by and large if these cases are reviewed, it will be seen that a relatively large share of them are self-limiting illnesses which if merely left alone, will soon subside and leave no mark. Office cases are in a distinctly different category, and most of them deserve more time and study than is ordinarily allotted to them. The reason so many doctors say they dislike their office work and regard it as a bore, is that they do it hurriedly and therefore poorly. They have not realized the importance of spending more time at it and making more extended inquiry into the ailments of their chronic cases. Many of these come to the office in the very beginning of their ailment, and study and record of such patients will repay in the long run, by shedding light sooner or later on the early manifestations of serious illness. Moreover this is just what is most needed. Hospitals are crowded with the acutely sick. The specialist and the laboratory man have almost no contact with the type of work which comes to the practitioner's office, and it is here that attention is first and earliest invited to the beginnings of disease processes. If the family doctor will realize this and take pains to be thorough, then file away for future reference the results of his thoroughness in the form of brief but accurate notes, he may waken some day to a dawning of knowledge both for himself and the profession at large.

## Esthetics A MOTOR TRIP WESTWARD.

Lancelot Ely, M.D.,  
Somerville, N. J.

*(Lest some one should question the propriety of presenting a travel letter under the head of "Esthetics," the Editor would explain in advance that the places visited and described by the author are of such marvelous beauty, exhibit so much of the best work of the greatest of all art masters, as to deserve consideration among the transcendental things. We invited, and urged, Dr. Ely to write up his summer's experiences because we knew well the places he was visiting; with the exception of Alaska, we have tramped over nearly all that ground. To any physician who wants a real "honest to God" vacation trip, we commend the reading of this article and adoption of this plan. We doubt if anywhere else in the world one could find more beautiful natural scenery or more health-giving and soul-stirring experiences.)*

A dream of many years, many months of planning, reading books of travel, and consulting maps and folders from Chambers of Commerce and Steamship companies, made preparation for our start on June 29, 1925, for our motor-camping trip to the west, with the National Parks our main objectives. A Packard touring car, equipped for general camping, was to be our home and abiding-place



for the summer months. Our passengers were son John, aged 16, Barbara, aged 12, Mrs. Ely and myself. We took just enough clothing to meet requirements, and plenty of bed blankets for the expected cold nights.

We left home early in the morning and made our first night's camp a few miles beyond Scranton, on the Lackawanna Trail; the second night along beautiful Seneca Lake; and the third at Niagara Falls. We had reservations on a Lake steamer from Buffalo to Duluth, sailing July 3, with our car on board, and the trip through the Great Lakes was most enjoyable. Stops were made at Cleveland, Detroit, Mackinac Island and Houghton, with its copper mines and smelters, and thence through the wonderful "Soo" Canal. At each stop we took the opportunity given to passengers to visit points of interest. Arriving at Duluth early in the morning of July 7, a trip around that charming city of beautiful homes ended the first stage of our journey.

After getting our first mail from home at the General Post Office, we left Duluth at mid-day, and journeyed through the vast lake region of northern Minnesota, and through



miles of fire-devastated forests. Each day from then on became a day of travel, allowing us stops at places of interest as they appealed to us and full enjoyment of the natural beauties of the country. Mid-day meals we had at hotels and restaurants, and nights we chose camping sites near ranch houses. Our chosen route took us directly west, through Minnesota, southern North Dakota and Montana. At Medora, in North Dakota, we spent the week-end at Peaceful Valley Ranch, visiting Roosevelt's ranching grounds and the Petrified Forest of the Bad Lands. Continuing still west to Billings, Montana, we turned south to Cody, Wyoming, to enter the Yellowstone Park through the Shoshone Canyon. The journey from Cody up the Shoshone River valley, past the great dam and lake of the same name, is a fitting entrance to the beautiful Yellowstone Park. Five days were spent in the Yellowstone, in admiration of the many freaks of nature, hot springs beside cold springs, mineral springs, boiling mud springs and mud geysers. The well-named Dragon's Mouth, with its gurgling of mud and belching of sulphur fumes, the Minute Man, and Old Faithful, all are beyond adequate description. We saw the grand canyon of the Yellowstone in a bright sun at mid-morning. The beautiful colorings of the Canyon walls and the rush of water over the falls in its depths made the grandest sight along our whole trip. Jim Bridger chose well when he took the Canyon rim as a camping site. We climbed Mt. Washburn, 10,317 ft. by auto—yes, our engine boiled before we reached the summit. Beneath us spread a vast expanse of mountains and valleys, and around us beautiful wild flowers made a carpet everywhere. It was Spring on Mt. Washburn. A three day stay at Mammoth Springs allowed us time to roam over the great terraces and to enjoy the delicate colorings of pink, green and blue, and the whitest of white in the most magnificent formations.

Well pleased with our first National Park, we went out of Yellowstone at Gardiner on the north, on our way to Glacier Park. Passing through Manhattan and Three Forks, Montana, we saw towns that were badly damaged by the June earthquake. At Three Forks, a crevice had been left in the main street more than a foot wide and very deep. It was here that my son asked an interested bystander as we were arranging our camp for the night, if they had any mosquitoes. Very quickly he answered: "No! We had one last week, and had a general round-up and caught him." Our New Jersey license created much interest, and often a laughing remark, "Mosquitoes", but we agreed that New Jersey should share this reputation with other states. We carried with us army mosquito tents, and the first night we

could sleep in comfort without them was at Billings.

Butte was our next large city of interest, and here we got permission to go down one of the great copper mines and see the latest methods of mining. From Butte, we traveled north, through the Flathead Indian Reservation along Flathead Lake to Kalispell, which was that day entertaining the famous Barnes' Circus, and the usual circus crowd was filling the town. It was easy for the young folks of our party to persuade the elders that such wonders should not be missed, so we too stood in line and sweltered in the hot sun until the big tent was opened up and we all filed in.

We entered Glacier National Park at Belton, and camped our first night along McDonald Lake, early the next morning starting on horseback for Sperry Glacier. There are few roads for autos yet developed in the Park, so tourists must go horseback or hiking. The "round" takes in beautiful Lake Ellen Wilson, Gunsight Pass, Blackfeet Glacier, to Going-to-the-Sun Mountain, then on to Many Glaciers, to Granite Park, and back to Lewis Hotel at Lake McDonald. Thanks to the surefootedness of the noble horse, up and down those perilous switchbacks, we returned safely to our starting point.

Out of Glacier again, we continued west into Washington, passing the interesting formation of the *coulees*, down into the fertile Wenatchee and Columbia River Valleys with their orchards of apples, plums, and pears, and on into Seattle. We placed our car in a garage there for slight adjustments, and secured passage on the Steamship "Yukon" for Seward, Alaska. Stops of several hours were made at all American ports and many canneries, and that makes a story all by itself, for we liked Alaska.

Returning to Seattle after this 18-day trip on the water, we started south, through Tacoma to Mt. Rainier. This National Park has its many attractions grouped around the beautiful snow-capped mountain which gives it its name. Hikes along the Sky-line Trail and to the saddle between Pinnacle Point and Cathedral Rock tempted us to try the summit itself, but we did not, and after 2 short and enraptured days we left, to continue south through Olympia, Portland and Salem to Grant's Pass. From here we went out to Oregon Caves and Crater Lake.

Crater Lake is a beauty spot. It is a deep purple-blue in shade, set in an old volcanic crater, 1900 feet below the rim. A trail a mile long down the steep crater sides brought us to the surface of the water—a mile down, they told us, but 10 coming back. A ride in a motor boat gives the beauties of the rim from the Lake, and takes the tourist



around Wizard Island and the Phantom Ship.

Traveling through southern Washington and Oregon, we had good views of snow-capped Mt. St. Helens and Mt. Adams, but Mt. Hood was lost in the clouds far beyond our view. Majestic Mt. Shasta staid with us all day after leaving Crater Lake. We continued south, covering that 21 mile up-grade over the Siskiyou Mountains into California, and down into the beautiful fertile valley of the Sacramento into Oakland and San Francisco. The trip to the several old Spanish Missions below San Francisco, as far as Carmel-by-the-Sea was most interesting. Then east to Yosemite Valley, over very mountainous roads. Two wonderful days were spent in the valley, awaking in the morning to the reflection of sunlight on the massive granite cliffs, and enjoying in the evening the shadows from the early setting sun. We were spell-bound at El Capitan and Half Dome, and the fire fall at Camp Curry. A trip into Mariposa Grove and drives among the big trees brought us through the "Wawona", the one made familiar to us by the picture in our school books, showing a stage coach driving through—this time it was a Packard, and plenty of space left at the sides.

We came on the main highway again, and on to Sequoia Park, to view still larger trees, and among them that largest and oldest living thing in the world, the "Gen. Sherman" tree. We enjoyed our camp in Sequoia, among those lofty giants; the deer and bear as friendly neighbors roaming about, and the companionable flicker of many campfires making a joy long to be remembered.

Again on the highway, we ran south to Bakersfield, passing one of the largest oil fields and oil containers of the country. We were pleased with Bakersfield, a prosperous city, with beautiful homes and business places, and delightful streets. Now for the Grand Canyon, the last Park on our itinerary. We decided to cross through the Mohave Desert, an uncertain undertaking from reports we had from other tourists who told of heat and sand and lonely stretches. Some roads were bad, there was plenty of deep sand but passable, and it was hot, but we made it. It was along this route across the desert sand that we saw a mirage lake. On approaching, we saw a great expanse of water, the first we had seen for days. We drove toward it on dry sand, and into the lake, but yet no water, though on all sides we could see the beautiful blue of a calm lake, with reflections from the sky and clouds on the water. We entered Needles at about 10 p. m., the hottest city in the United States, and generally passed by the motorist in the cool of the night. It was very hot, but a very comfortable tourist camp with fine shower baths, and a refreshing sleep in the

open made us again ready for an early start in the morning, and we made Williams, Arizona, for the next camp, over good roads, in a rolling hill country, and cooler.

From Williams entrance, we went into the Grand Canyon. Words cannot describe it. We went down the Bright Angel Trail to Phantom Ranch, on mule back, and had the thrills of seeing our mules stand head and shoulders over the precipitous cliffs as we made the hair-pin turns on the trail, and were properly thankful that they never did take that one extra step and fall over. Down the "Tip-Off" and across the Colorado River by the suspension bridge, we went on to Phantom Ranch for the night. We saw the sunset colors on the Canyon walls from the valley, the star light, and the sunrise the next morning. Up Yaki Trail to "Poison Point", where King, our guide, told us "one drop will kill you", and then to the rim again, completed a round worth all the thrills and terrors. Out to see the Painted Desert and Grand View—one wonders if it is possible the Colorado has carved out this great formation.

Back at Williams, we went with a guide to a newly discovered cliff-dwelling in the J. D. Canyon. A ride over rough mountain roads in a Ford, a hike for 3 miles through a pathless forest, and then a climb down the steep face of a limestone cliff for about 500 feet, brought us to a great rock shelter, 1000 or more feet above the floor of the valley. My son and I entered this wonderfully preserved home of 4 large rooms, the first tourists to see it. The walls are plastered with mud and stone, with the imprint of fingers still in the mud plaster. Who built it, and when, is still to be found out, but whoever lived there, they were well protected from storm and attack.

We continued south and west, through Arizona into California, walked over into Mexico at Calexico, decided that the atmosphere of the United States was more comfortable, and on to San Diego. The short ride from there to Los Angeles was a constant delight—the splendid beaches, the beautiful homes and resorts, and the background of blue Pacific beyond. Visits to Hollywood, Pasadena and Catalina Island ended our California experiences, and we sailed from Los Angeles September 28 on the "Manchuria", through the Panama Canal to New York and home. Stops at Balboa to visit the locks and old Panama City, the trip through the Canal, and a few hours at Havana made interesting breaks in a 16-day water trip. We reached New York October 14, after 3½ months away.

It was a most successful summer's vacation. We found roads and weather generally fine. Our car traveled 7471 miles, and our water travel was 10,525 miles.

## Clinical Reports.

### A CASE OF MALFORMATION IN NEW-BORN.

Lida Stewart-Cogill, M.D., Philadelphia, Pa.

**Clinical History:** Male child born on December 19, 1923. Mother, a healthy Mexican woman, Para VI; no other deformed children. Pregnancy normal with normal delivery. At birth, absence of anus and bifid scrotum noted. One hour after birth baby became very cyanotic, but attack proved transient. Operation for artificial anus performed 6 hours after birth under ether anesthesia, during which cyanosis returned. Incision made posteriorly, pelvis opened, and exploring finger carried to brim of pelvis without finding sigmoid or colon. Incision closed. Left rectus incision, made and a great deal of distended small intestine protruded. Colon was located and a loop as low as possible below cecum was selected, sewed to upper angle of incision and clamped with hemostate.

No food was given for 24 hours, and only minute quantities of water. At end of 24 hours wound was dressed and small opening snipped in knuckle of intestine. Much gas and some meconium escaped. Some regurgitation of food.

The following day, infant passed urine colored with meconium and finally feces passed through anus. Abdominal wound healed as did posterior incision. Cord came off promptly, and without infection. Child was given mother's milk, but did not nurse the breast. Cyanotic attacks continued, being transient in character and appearing several times a day; limited to hands and face, and accompanied by marked acceleration of respiratory rate. During third week child lost rapidly in weight, abdominal wound became inflamed, and 2 sinuses appeared in posterior healed incision. On January 9 at about 3 a. m. baby became cyanotic and died.

**Autopsy Findings:** Large intestine descending in straight line to base of bladder posteriorly. Rectum and sigmoid flexure both absent. Left kidney greatly enlarged and left ureter enormously distended and inserted at base of bladder posteriorly near attachment of descending colon. On section of kidney pus exuded from cortex. Right kidney situated at brim of pelvis and only size of lima bean with small ureter passing down to bladder. Other abnormalities of heart and lungs present.

Most malformations of the rectum and urogenital passages fall into a few well recognized groups and are wonderfully constant in their anatomic arrangement: (1) A terminal septum closes the orifice (Imperforate anus). (2) Absence of portion of tube, postallantoic gut has failed to form (Imperforate rectum),

Difficulty in treatment often arises from the idea that if the gut is not found ending at proctodermal depression it may end anywhere. As

a matter of fact, it has been proven that the end of the gut is located at a definite point and this for the reason that in imperforate rectum a definite embryologic portion of the gut is missing; namely, the postallantoic gut. Therefore, it has been stated when the gut does not end at the proctodermal depression, its disposition within the child's pelvis is such a one as admits of deliberate and ordered search via the perineum, with good chance of success.

### REPORT OF A CASE OF ACUTE MONONUCLEOSIS.

D. W. Scanlan, M.D., Atlantic City, N. J.

The subject of the case report which follows, a New York physician specializing in obstetrics, was spending an evening at my home, in company with my wife, another physician friend, and myself. During the evening he related to me the history which follows, of which he was the subject. He stated that he and his medical associates at home had wondered what the condition was. I recognized it as a case of acute mononucleosis, and stated my diagnosis.

This disease was described sometime ago by Lowne, (Am. J. Med. Sc., 164-781, Dec., 1922). It occurs chiefly in young men, is transient in character, self-limited, and, up to date, not known to be a forerunner of or to have any connection with any of the blood diseases.

**Past History:** Measles, mumps, scarlet fever, influenza 1918 and 1919; the scarlet fever was complicated by a severe cervical adenitis, which subsided spontaneously. Habits good.

**Present illness:** Upon awakening on July 18, slight stiffness was present in the region of the right sternomastoid muscle, at about junction of the lower and middle thirds. The condition was disregarded until the following morning, when an anterior cervical node, which was quite tender, could be palpated; it was the size of an hickory nut, 3 x 3 cm. approximately. At this time quite some pain occurred with rotation of the head and friends remarked that apparently some gain in weight could be seen. It became necessary to loosen shirt collars. The following day, the posterior cervical nodes on the right side enlarged, varying in size from a pea to a hazel nut, accompanied by marked tenderness and visible swelling. No rhinitis nor tonsillitis had preceded the condition. The onset was insidious and quite abrupt, and completely devoid of prodromal symptoms. Temperature was not recorded because, subjectively, it did not seem elevated, and the cervical condition, although distressing, was not alarming. In an endeavor to determine the underlying cause an x-ray examination was made of the teeth and sinuses with negative results.

On July 23, a blood count revealed the following picture: Bb., 95%; red cells, 5,000,000; color index, 0.9; red cells show no pathologic elements; white cells, 6000; small mono, 64.4%; large mono, 11.4%; transitional, 0.6; polymorphs., 21.2%; eosinophile, 0.4%.

This blood count persisted for several days, gradually assuming a normal, white cell percentage, 2 weeks later. The local condition subsided synchronously. Potassium iodid (1:1 sol.) and hot Zonite gargle had been recommended, but in the estimation of the patient the condition was self limited. I may add that since the total count was unaffected, I was not unduly concerned, but I was pleased to see the blood picture return to normal.



## Current Events.

### INTERSTATE MEDICAL CONFERENCE.

Minutes of meeting held in Atlantic City,  
November 7, 1925.

Pursuant to an invitation issued October twenty-third to the Presidents, Secretaries, Chairmen of Legislative Committees and Editors of the New York, Pennsylvania and New Jersey State Medical Societies, and to the Secretaries of the Boards of Medical Examiners of those states, to confer regarding medical problems of mutual interest, a meeting was held at 22 Grammercy Court, the office of the New Jersey Medical Journal's Editor. The following were present: Frank C. Hammond, Joseph S. Lawrence, Lucius F. Donohoe, J. B. Morrison, Alexander MacAlister and H. O. Reik. Letters or telegrams were received from the following: N. B. Van Etten, Ira G. Shoemaker, D. S. Dougherty, W. F. Donaldson, O. S. Wightman, I. D. Metzger, Harold Rypins, G. A. Knowles and Walter Lee.

In opening the meeting, Dr. Reik explained the origin of the movement: Gentlemen: If you will permit me very briefly to state the reasons for calling this conference, I would like to say that, shortly after my engagement by the New Jersey State Medical Society, the secretary of that organization, Dr. Morrison, instructing me as to my duties, advised that I should "arrange a personal meeting with the executive secretaries of the medical societies of New York and Pennsylvania to discuss with them the problems they are attempting to solve and the methods they are applying to carry on public education along the lines desired by our profession", and, that later, while dealing with legislative matters last winter, I became impressed with the idea that there were a number of questions inviting harmonious action on the part of these 3 societies and that should be of interest to several of the officers of each society. It was not possible for me to arrange last winter for even such interviews as Dr. Morrison had recommended, partly because my own time was so fully occupied with other duties, and partly because I judged, from reading the Journals of the other state societies, that their executive officers were likewise exceedingly busy.

I did pay visits to Dr. Overton and Dr. Hammond during the early summer months and gained some helpful suggestions regarding journalism. The necessity for coöperation was brought much more forcibly to my attention during the months of May and June by news of the unfortunate impasse that seemed to have arisen between the State Boards of Medical Licensure of Pennsylvania and New Jersey. I then wrote to Drs. Hammond and Overton suggesting that the editors of the State Journals initiate a movement for closer coöperation between the medical societies of these neighboring states, whose problems must be much the same, who must desire to avoid friction of any sort, and who might possibly, by working together, ultimately secure results beneficial to the profession through the establishment of practically identical conditions governing the practice of medicine in this territory.

Having received their endorsement to the plan of calling a conference of officers charged with the conduct of the business of the respective state societies, the secretaries of the respective Boards of Examiners, and the editors of the 3 Journals, I contemplated calling a meeting for some time in October, but finding so many other

medical meetings being held during that month, finally concluded, after consultation with Dr. Hammond, to set this date for our first meeting.

As already explained by letter, it seemed unwise to delay such a meeting until an elaborate program might be arranged (our several state legislatures will be meeting before many months) and I took the liberty of making up a tentative program and of suggesting topics for discussion, I trust those of you who were thus somewhat arbitrarily assigned the task of opening a discussion on some point will pardon the liberty taken and will realize, as I tried to explain in letters to each of you, that such assignment was solely for the purpose of introducing these topics for consideration and was not meant to limit in any way the number or character of subjects that might be considered nor was it expected that you should prepare formal papers upon the subjects mentioned. There are possibly many other topics worthy of our attention, and the ones suggested may not be at all the most important for consideration at this time; the point in mind was that we all desire to meet in conference, that the best way to start such a movement was to start with some possible workable suggestion, and then let nature take its course.

The Presidents of all 3 State Societies have approved the plan adopted.

It has been my pleasure, as I felt it was my duty, to take the preliminary steps looking to organization of a conference of the medical representatives from these 3 states. From this moment, it is for you to say what further steps shall be taken. If you desire to proceed with the conference, in order that we may conduct this meeting in an orderly manner, I would respectfully suggest that you select a presiding officer and I shall be very glad to entertain a motion nominating someone of your number to serve as chairman of this meeting, and upon his election to turn the proceedings over to the chosen leader.

Dr. Donohoe was unanimously chosen as presiding officer.

Dr. Hammond spoke on the subject of coöperation between the state medical Journals and the possible advantages of united and simultaneous efforts in delivering important information to the profession in this large district.

Dr. Morrison opened discussion on "Medical Practice Acts" and, after briefly referring to the differences between the laws of the several states, stated his belief that the ideal medical practice act is that embraced in the Kelly article on "The Regulating of Physicians by Law". We should get away from particular recognition of schools of medicine; should maintain high standards of premedical education; insist upon the conferring of medical degrees only upon persons who have thoroughly studied every branch of science dealing with human health, disease and deformity; let all would-be practitioners of medicine be educated and examined alike as regards fundamental sciences and then follow whatever line of therapeutics they might choose.

Dr. Morrison felt that it would be unwise to attempt at the present moment, in New Jersey, a substitution of the Kelly Act for the existing law but he believed any changes made should be in the line of ultimate accomplishment of that object.

Dr. Hammond explained the present situation in Pennsylvania where the Homeopaths have equal representation with Regulars on the Examining Board and refuse to concur in any alteration of the law unless guaranteed continuance of that relative membership. The proportion of Homeopathic to Regular practitioners in



the state is about as 1 to 4, yet they demand equal representation on the Board. In consequence, the State Society has recommended adoption of a law providing for a single board (disposing of the existing Osteopathic Board) the members of which shall be appointed by the Governor and without designation as to schools.

In discussing this question, the general opinion of those present was that the "non-designate" board would be a dangerous proposition. Dr. Hammond thought his state society may change its attitude on this point before the Legislature convenes, in 1927. He referred to the fact that conditions are much the same as in other states in that legislators ask—"Why don't you men get together, decide on something definite and have it overwith?", as they are tired of having the medical practice act brought up at every session.

Dr. Lawrence described the workings of the New York law under direction of the Board of Regents, and explained some of the changes sought for in the act prepared for submission to the next General Assembly. He referred to efforts in other states, notably California, Oregon and Washington, to have lay organizations assist in procuring desired medical legislation, and the general attitude of legislators toward the medical profession.

Dr. Lawrence distributed copies of the proposed New York amendments, emanating from the State Medical Society; heretofore practically all changes in the Medical Practice Act have started from the Department of Education but the physicians have been held responsible by outside interests. The new act will provide for registration of all physicians but it will be a single, not an annual, registry. Another new feature will be provision for a "Commission on Discipline" whose function shall be to deal with troubles arising between physicians, between the laity and physicians, or charges concerning physicians; this will be comparable to jurisdiction of Bar Associations in the practice of lawyers, even to the point of procedures similar to disbarment in lieu of the present methods of securing revocation of license. In the composition of this commission provision is made for recognizing the different schools—regulars, homeopaths and osteopaths.

Reik: Your plans, then are to preserve the present establishment of a uniform examination for all candidates for a license to practice, to secure a complete registration, inaugurate the new disciplining commission, and to fight against any proposition to establish a separate Chiropractic Board.

Lawrence: Yes, that summarizes it.

Morrison: How many chiropractors in your state?

Lawrence: About 1000.

Morrison: Do you not think they are there to stay and should in some manner be regulated by law?

Lawrence: They are not acknowledged to be there to stay but are there because of the inefficiency of our present laws. Anyone practicing in New York state without license from the Board of Regents could be ousted tomorrow if we had the necessary executive machinery. Unfortunately, this machinery does not exist.

Morrison: Realizing that the "cults" have a certain hold upon the people, would it not be wiser to bring about some method of control rather than put up a fight?

Lawrence: I think we are ready to see it that way but it is not for us to draw such a Bill. If the chiropractors will meet the fundamental requirements and agree with the Regents as to examinations they might together draft a satisfactory law.

Reik: You are of course familiar with Wisconsin's recent law which might be considered by other states where the Kelly law cannot yet be obtained and which have not an enforceable law regarding the fundamental medical branches.

Dr. Hammond explained some of the complications arising in Pennsylvania in consequence of efforts to cover chemistry, physics and biology among the premedical school requirements; though these are being gradually overcome. Chiropractors are not licensed nor recognized by law, yet they are practicing in large numbers.

Dr. MacAlister expressed the belief that the New Jersey Medical Practice Act is one of the best in the United States and reported that his board has been very active in the matter of prosecutions during the past year. Such cases are tried before the presiding Judges, not by jury, and this fact has facilitated and favored the work.

Dr. Donohoe called attention to the fact, however, that one conviction has not succeeded in disposing of many of these illegal practitioners; they pay the fine and continue to practice. It will be more effective, possibly, to exert our efforts in direction of preventing them starting in practice, and to that end we should work to educate the profession and the public to the desirability of ultimately establishing something like the Kelly law.

Dr. Donohoe described the efforts made in New Jersey during recent years to secure adoption of the so-called "Doctor's Title" Bill, explaining the object of that bill and the consideration at present being given to the question whether it should be re-introduced at the coming session of the state legislature. Drs. Morrison and Reik related some of their experiences in connection with this legislation and Dr. Lawrence told of the efforts made in New York to prosecute persons falsely using this title and for practicing without a license; the latter had observed, in connection with prosecutions for practicing without a license, that out of 45 cases there were only 3 in which the individuals were using the title "Doctor"; they were rather relying upon the cult name for their business success. Lawrence believed it would be difficult to secure convictions for simply misusing the title.

Dr. Lawrence called attention to New York's effort to reconstruct the "Workmen's Compensation Law" so that the medical aspect of it should be under control of a medical board.

Drs. Donohoe and Reik referred to conditions in New Jersey as a model example in that respect, where all such matters are under the control of Dr. McBride. Dr. Hammond reported that conditions in Pennsylvania were rather bad in that respect; efforts to amend the existing law had failed of adoption.

Dr. Lawrence suggested that this is one subject upon which the 3 states might unite in an effort to secure uniform and satisfactory legislation.

Dr. Reik stated that insofar as he was aware, New Jersey's Commissioner of Labor, Dr. McBride, is not seeking any new legislation on this question but he was certain that, out of his wonderful experience, Dr. McBride would be of great help in planning such uniform legislation.

Following the program, Dr. Morrison introduced for discussion the subject—What Provision Exists, or Should be Made, for Supervision and Control of Private Hospitals—stating that his attention had been called to the matter by the increasing number of private hospitals in the larger cities where abortions are being performed and where other surgical work is without adequate supervision. Even the smaller public hos-

pitals, down to 50 beds, are standardized by the American College of Surgeons and that brings them under periodic inspection, but there is no such supervision of private hospitals. Dr. Morrison believed that these institutions should be required to take out a license and to submit to supervision of their accommodations, of the physicians or surgeons on their staff, and of their books showing business transactions.

There was general concurrence in the view that this condition exists in all 3 states and that this is another problem where by coöperation conditions could be improved in accordance with some generally acceptable plan. It was suggested that such hospitals might be brought under control of the State Boards of Health.

The next problem submitted concerned "The Nursing Situation", and was introduced by Dr. Lawrence who described the conditions in New York where the nurses are acting on lines parallel to those of a labor union and thereby causing considerable disturbance in relations between the physician and the patient. He stated that consideration is being given to the advisability of introducing legislation looking to recognition of a class of "Trained Nurse" as distinguished from the recognized "Registered Nurse", and, legislation looking to control of the Bureaus of Nurse Registration, so that the physician or patient engaging a nurse should be able to learn something definite about her qualifications. Discussion of this question disclosed the fact that it is a serious problem in all 3 states, that it has ramifications in several important directions, but that no one had ready a solution for these problems.

At the conclusion of this conference, it appeared to be the opinion of all those present that the results of the meeting had justified its being called and that it seemed desirable to continue the project of developing interstate coöperation. It was suggested that New York City might be the most central place for meetings, and Dr. Lawrence said he thought it possible that after presenting his report of this meeting to the New York State Society officers, a second conference might be invited to convene in that city.

The meeting then adjourned, subject to call of the chairman, and to accept an invitation from Dr. Donohoe to lunch with him at the Hotel Traymore.

HENRY O. REIK, M.D.,  
Acting Secretary.

#### A NEW PEACE MESSAGE.

Delivered by

J. Bennett Morrison, M.D.

Mr. President, Officers and Members of the House of Delegates of the Medical Society of the State of Pennsylvania:

I assure you it is a privilege and an honor to address you on behalf of the Medical Society of the State of New Jersey, and to convey to you, on this auspicious occasion of your seventy-fifth birthday, our felicitations and congratulations. Realizing the value of minutes in any meeting of a House of Delegates, my remarks will be brief and concise. My presence here today is at the special request of the President of the Medical Society of New Jersey, to address you on the differences which you all know exist between our State Board of Medical Examiners and your Bureau of Licensure in regard to the standardization of hospitals approved for internship. On this matter the two Boards have reached a deadlock:

At the very outset, I wish to make it perfectly

clear that I do not bear a brief for the State Board of Medical Examiners in New Jersey, and I wish to make it equally emphatic that I am not here to criticize or discuss, in any manner, the actions of your Bureau of Licensure; both of these Boards have their prerogatives, and I have learned, since coming to Harrisburg, that your Bureau of Licensure is operating under the provisions of a recent act of Legislature, giving them sweeping powers in the matter. A few sentences will state some facts.

It is a fact that your Bureau of Licensure has excluded from their approved list all but about a dozen of the hospitals in New Jersey which have been accorded the approval of the Hospital Standardization Committee of the American College of Surgeons. It is a fact that our Board, acting in defence of their own position, has ostracized all the hospitals in the State of Pennsylvania. No graduate, having taken an internship in any hospital in your state is eligible for licensure in the State of New Jersey. The result is a deadlock.

It is perfectly plain to any fair-minded body of men that a great injustice is here being perpetrated. At a period when the most influential and far seeing members in our profession in America are questioning the wisdom of the time spent in the study of medicine and of the strict requirements for licensure, is it wise to increase these requirements? We all know that the classes of students in our Universities and Medical Colleges are only half the size they were when you and I were studying medicine. When there is a well known shortage of physicians, when the rural communities in both these states are crying out for medical service, is it wise to add further burdens and impose greater hardships upon our graduates applying for licensure? As it is now, only the sons of affluent parents can afford to take up the study of medicine and the time for obligatory preparation consumes at least 9 years of their economic value to the community. Considering also the hardships imposed upon hospitals and the added suffering to humanity, the situation becomes intolerable.

Let me say to you that in the history of all great movements, where two bodies of men have been striving for the same accomplishments, the same high ideals, but have been estranged on some matter of policy, their differences have always been solved. You all remember the bitter altercations which kept the great Medical Society of the State of New York and the American Medical Association at loggerheads so long. For years the impish witches, with malevolent glee, danced around the fire beneath that caldron of discord. Today the Medical Society of the State of New York is one of the eastern ramparts of the American Medical Association. About 6 years ago the conference for the formation of a League of Nations in Europe broke up in discord. The ambassadors returned to their respective countries convinced that the project was dead. Today we are almost on the threshold of that magnificent tribunal for the underlying principles of which, Woodrow Wilson, the great peace advocate, laid down his life.

I repeat, these differences can and must be solved. Those Boards, elective or appointive, cannot long exist who persist in creating disharmony and disaccord between the medical bodies of these great commonwealths. No bar sinister may be drawn across the field of our harmony. We are too broad, too liberal, we have too much in common; we need each other's sympathy, coöperation, advice and friendship in our struggles for the maintenance of the proper



standards for all who would treat the sick. We must coöperate for the sufficient standardization of all hospitals, public and private, all sanatoria, all maternity homes, so that they may be brought under the supervision of the proper authorities. Only by such control can the protection and welfare of the public be conserved. We must press on together toward the goal of high ideals to which we are both pledged.

The deadlock between these two Boards is analogous to that great steel bridge suspended, unfinished, over the Delaware between Camden and Philadelphia. As it stands today, it is a monument to the stupidity and unreasonableness of certain parties and groups in both our states. That this structure will never be completed is unthinkable. That the differences between these Boards will not admit of solution is equally unthinkable.

I come to you from the Welfare Committee of our State Society, which has power to act. We propose that a joint committee be appointed consisting of 2 members of our Hospital Standardization Committee, 2 members of a similar committee in your Society, 2 members of our State Board of Medical Examiners, 2 members of your Bureau of Licensure, a member of the Hospital Standardization Committee of the American College of Surgeons, the Attorney-General of the State of New Jersey, and the Attorney-General of the State of Pennsylvania. The subject may then be approached from the standpoint of hospital standardization, the viewpoint of the 2 Boards of Medical Examiners and the laws bearing on the matter may be expounded with authority, and if the subject is approached with earnestness, fairness and candor, a solution should be found satisfactory to all concerned. Again I urge upon you, "Let us have peace."

I thank you, Mr. President, for the courtesy extended in permitting me to address your House of Delegates.

## PRACTITIONER'S RELATION TO BOARDS OF HEALTH.

### The Detection of Typhoid Carriers.

State Department of Health Adopts Regulation Requiring Release Cultures from Typhoid Convalescents.

Henry B. Costill, M.D.,  
Director of Health, Trenton, N. J.

More than 500 persons recover from typhoid fever each year in New Jersey. Of these convalescent cases, from 10 to 25 become chronic carriers of the typhoid bacillus—according to the estimates of competent observers—and a larger number become temporary carriers of the disease. It is these carriers of typhoid fever who are largely responsible for the continued prevalence of the disease, for we no longer have the explosive outbreaks of this disease due to infected municipal water supplies, which were prevalent until the close of the last century. Now that nine-tenths of the population of New Jersey lives in communities with adequately protected water supplies and at least some protection of the milk supply, we have reached the stage where the incidence of typhoid fever can be lowered only by the detection and supervision of typhoid carriers.

There are two methods of detecting the carriers of typhoid bacilli. One is by the study of known cases by health officials to determine, if possible, the source of infection. This study is successful in only about two-thirds of all the

cases, and it has the obvious disadvantage of waiting for the damage to be done before preventive measures can be taken. The most satisfactory way to detect typhoid carriers is by examination of the stools and urine of all convalescent cases. Appreciating the practicability of this proposal and its importance to the health of the people in New Jersey, the State Department of Health enacted the following regulation as a part of the State Sanitary Code:

"Regulation 34a.—Supervision of cases of typhoid fever and paratyphoid: It shall be the duty of the local board of health when a case of typhoid fever or paratyphoid occurs within its jurisdiction to keep such case under supervision until the temperature has remained normal for 7 successive days and until 2 successive specimens of both the intestinal discharges and the urine of the patient, taken at an interval of not less than 7 days, have been found to be free from typhoid bacilli, said examinations to be made in the laboratory of the State Department of Health or in a laboratory approved by said department for such examination."

Practicing physicians have a duty to the family of the patient as well as to the patient. The physician must not only treat the case of typhoid fever, but he must protect the family of his patient by assuring himself that isolation is maintained until the convalescing patient has not only recovered from the disease but is no longer a danger to his family and his associates because he is eliminating typhoid bacilli in his stools or urine.

The problem of the supervision of the temporary or chronic typhoid carrier is a difficult one. If the public is to be safeguarded, the physician must inform his patient who is a typhoid carrier of the danger which he is to his family and acquaintances. He must know not only how to care for himself to protect others, but must be impressed with the importance of such care as well. Typhoid fever carriers should be instructed to:

(a) Refrain from handling food to be eaten by others.

(b) Dispose of feces and urine only in a sanitary sewerage system or in a fly-tight privy so located that leachings cannot enter any water used for drinking purposes (even in such privy vaults excretions should be disinfected).

(c) Wash his hands thoroughly with soap after using the toilet.

(d) Remain within the jurisdiction of the board of health except when permitted to go elsewhere.

It is the duty of health officials to take steps to prevent typhoid carriers from endangering the health of others by the neglect of these simple and easily understood rules. It is important, however, that the practicing physician help officials by advising the patient, for such advice is better received than are the orders of the health official.

Guzzle—Why all the bandage on Jones' head?  
Guzzle—Rotten bridge.

"Break through?"

"No, trumped his wife's ace."—Texas Ranger.

Doctor: "What! your dyspepsia is no better? Did you follow my advice and drink hot water one hour before breakfast?"

Patient: "I did my best, but I couldn't keep it up more than ten minutes."



## Observations from the Lighthouse.

*In these "observations", we aim to present each month a few suggestions for thoughtful consideration, and to offer such assistance as we may be able to render from this office to those interested in further investigating the topics submitted. We can deal with only a few subjects each month and will select those that have appeared most prominently in the scientific literature of the preceding month as original articles in the leading periodicals, and we shall not attempt to discourse extensively upon any subject, the object being rather to stimulate interest in the establishment of personal postgraduate reading courses suitable to the individual. If any reader of the Journal should find himself sufficiently interested in any subject discussed in these columns to desire further information, we shall be very glad to furnish an enlarged bibliography upon that question, and, if he wishes to procure ample abstracts of the original articles quoted, or access to the complete original, we can put him in the way of obtaining that material promptly and at a minimum of labor and expense.*

### THE ROLE OF PREVENTION IN PEDIATRICS

J. H. Mason Knox, of the Johns Hopkins Medical School, in a consideration of this topic (*N. Y. Jour. Med.*, 25:921, Oct. 1, 1925) recently stated that whether or not the health of school children is to be considered as a primary responsibility of the school commissioners or of the health departments, all matters pertaining to the health of children in schools should certainly be under the direction of physicians interested in and trained to this particular work. He believes that the school physician should pass upon such important matters as building construction, with regard to air space, ventilation, lighting, wash-room and toilet facilities, the type of desks and seats, and deal with all questions relating to the hygiene of school life. Furthermore, competent medical authority should supervise instruction in health matters, as given to all school grades, and should advise as to school hours, rest periods, and the amount and character of recreation for the children. In coöperation with teachers, it is the physician who should direct the daily instruction and occasional examination of the school child and determine what precautions are to be taken to prevent the spread of communicable diseases. Where abnormal conditions are found, the school physician should consult with the family physician concerning the care of the poorly nourished or otherwise physically handicapped child.

### RESPIRATORY CATARRH IN CHILDREN.

R. C. Clarke (*London Lancet*, 2:847, Oct. 24, 1925) declares that upon making routine examinations of infants from 3 to 6 weeks old, he has noted that at least 50% of them had some degree of respiratory catarrh, which he believes is due to the fact that the very young mucous membrane may be deficient in resisting power and that when such membrane has been subjected to early or repeated attacks by microorganisms it may lose such adequate resistance as it had possessed or acquired. The chief sources of infection for the infant are the mother and the germ-laden atmosphere. To prevent infection, if the mother has acute catarrh when the baby is born, she should be instructed to wear a folded handkerchief over the mouth and nose while feeding or dressing the baby; similar precautions apply, of course, to the maternity nurse or other persons coming in close contact with the infant. To avoid infection from the atmosphere, care should be taken to provide plenty of fresh air and to bathe the infant in front of the fire with all the windows open, for nothing can be worse for the baby than an overheated stuffy room.

### WHOOPIING COUGH.

Meyer and Burghard (*Zeitsch. für Kindhilk.*, Berlin, 40:1, Sept., 28, 1925) report from the Düsseldorf clinic an analysis of 442 cases of whooping cough in infants less than 1 year old, 423 in older infants, and 199 in children over 3 years of age, and they lay emphasis upon the absence of the distinctive whoop in the younger infants. They believe that an epidemic may readily be established through the failure to isolate children because of delay in waiting for this symptom. Attacks of sneezing may initiate or substitute for the usual whooping paroxysms. It is to be remembered that whooping cough is a serious disease in infants; it may induce fatal closure of the glottis or fatal convulsions; complications of a pulmonary character are common; and, bacteremia is not infrequently observed and is generally fatal.

In the experience of these authors no drugs displayed any efficacy in treating these infants, but vaccine therapy seemed to aid in aborting the disease though it had no appreciable effect once the disease had become established. Of the total number of cases, 1064, the mortality was 38% for infants under 3 years of age; 10.4% for the children between 2 and 3 years and 3% for the children over 3 years of age.

R. P. Seitz (*Am. Jour. Dis. Children*, 30:603, Nov., 1925) reports 2 interesting cases of pertussis with unusually high leukocyte counts: in one case the highest count was 192,000 per c.c. with 28% of polymorphonuclears and 61% of lymphocytes; in the second case the highest point was 162,500 leukocytes with 24% of polymorphonuclears and 74% of lymphocytes.

Two interesting cases of spasmophilic pseudopertussis are reported by Wernstedt, (*Acta Pediatrica*, Upsala, 5:1, Oct. 22, 1925) where the attacks resembled whooping cough in every respect. In one instance the child had suffered an attack of true pertussis some 6 months previously and the attacks were controlled by calcium but reappeared when the calcium treatment was discontinued. In the second case the child presented the pertussis syndrome whenever it was fed upon whey. In the same Journal Klercker and Odin discussed the subject of phosphate tetany and suggest that the tetanogenic action of phosphates depends upon a lowering of blood calcium rather than an increase of bicarbonate content of the blood; the threshold of action is lower in spasmophilia probably because of disturbances in the regulation of blood calcium in spasmophilia.

With reference to methods of treatment for whooping cough, Charles J. Bloom, (*Arch. Pediat.*, 42:485, Aug., 1925) publishes another report on his experience with vaccine therapy in dealing with this disease in institutions. The vaccine employed was a recently prepared mixed stock vaccine wherein each cubic centimeter contained 5,000,000,000 Bordet-Gengou bacilli and 3,500,000 influenza bacilli. As to method of employment, infants under 6 months of age were given 3 doses, on alternate days of 0.25 c.c.; infants between 6 months and 1 year of age were given the same number of doses of 0.5 c.c.; and children between 2 and 6 years of age doses of 1.25 c.c. on alternate days. As a prophylactic, the results were excellent: In previous years approximately 50% of the entire number of children living in this institution contracted whooping cough, whereas, between May, 1919, and January, 1920, there was not a single case developed in the institution. It would seem evident that this vaccine has great possibilities for the prevention of whooping cough in asylums,

schools and public institutions and in placing a limitation upon disastrous epidemics.

Bloom concludes with a statement that "after 13 years of observation and considering the fact that the author has followed many plans of treatment and different combinations of vaccines, this therapy in the management of whooping cough is found to be the most efficacious in all respects. As a preventive less than 1% of those vaccinated have up to this time developed whooping cough. And finally, the death rate may convert those who still doubt the value of vaccine therapy in whooping cough." The mortality statistics for the United States in 1922 assigned whooping cough a death rate of 5.6%, whereas in Bloom's experience the death rate is reduced to zero.

#### PYODERMITIS IN CHILDREN.

Chatin, (Paris Médecin, 6:829, Aug., 1925) calls attention to the possibility of suppurating skin diseases becoming epidemic in day nurseries and other places where young children are collected. In 6 years of experience in handling such conditions he has found the stock staphylococcus vaccine to be ineffective but an autogenous vaccine has proved servicable in a number of cases. However, the most satisfactory treatment recently employed seems to have been the use of ultraviolet rays given at 1 day intervals, the first exposure being for 2 minutes and successive ones prolonged by 2 minutes each until each exposure covered a period of 10 minutes. The development of folliculitis into pyodermitis was checked by this treatment in the already contaminated children and it seems possible that the ultraviolet rays may be counted upon to arrest an epidemic.

Considering perspiration as a cause of pyodermitis in young infants, A. B. Marfan, (Presse Médicale, Paris, 33:1313, Oct. 3, 1925) looks upon artificial feeding and rickets as possible causal factors in producing habitual excessive perspiration in young infants. If the sweat is of abnormal composition and is not freely evaporated, it irritates the epidermis and causes a red miliaria. Itching, with subsequent scratching of the vesicles, favors invasion of the epidermis and sweat glands by pus-forming cocci and the consequent development of pyodermitis. Such children should be guarded against overheated rooms and excessive clothing or bed covering, for all treatment of the inflammation will fall so long as there is continuance of the excessive sweating. He believes that epinephrin, associated with calcium phosphate, cod liver oil, or the application of ultraviolet rays, will reduce the tendency to sweating and will promote healing of the inflammation.

#### PEPTIC ULCER IN CHILDREN.

Stulz and Woringen report 2 interesting cases of peptic ulcer in Meckel's Diverticulum in children and refer to 11 other cases recorded in medical literature, (Paris Médical, 57:361, Nov. 7, 1925). The first symptom, and also the most constant complication, is apt to be profuse intestinal hemorrhage, characterized by an unchanged color of the blood and the tendency to recurrence. The hemorrhage may persist and cause grave anemia or even death. Perforation of the ulcer occurred in 10 out of the 13 recorded cases; 7 died from perforation followed by generalized peritonitis; 1 died from anemia with localized peritonitis; and the remaining 5 were saved by operation. The condition has to be differentiated from intestinal invagination and tumor of the large intestine. The treatment is necessarily surgical.

## In Lighter Vein

As a general rule, a man who doesn't know his own mind hasn't missed so much at that.

—Arkansas Gazette.

The captain of a coast guard boat recently chased and opened fire on a Government munition boat that was carrying a cargo of two tons of high explosives. That stuff they're selling at the twelve mile limit certainly puts fight in a man.—Judge.

**Couldn't Make the Grade.**—Janie was returned from the Home of the Feeble-Minded to the Orphans' Home, as the doctor's examination had proved her merely "subnormal".

Said Mamie to Anna in a burst of confidence and gossip: "Janie was sent away to be an idiot, but she couldn't pass and had to come back."

—Harper's.

#### Catering Made Easy.

Methuselah ate what he found on his plate,

And never, as people do now,

Did he note the amount of the caloric count—

He ate it because it was chow.

He wasn't disturbed, as at dinner he sat,

Destroying a roast or a pie,

To think it was lacking in granular fat,

Or a couple of vitamins shy.

He cheerfully chewed every species of food,

Untroubled by worries or fears

Least his health might be hurt by some fancy dessert—

And he lived over nine hundred years!

—Galt Evening Reporter.

"I say, waiter, the flowers on the table are artificial, aren't they?"

"Yes, sir. That's the worst part of running a vegetarian restaurant—if we use real flowers the customer eats them".—Norwalk Dispatch-Times.

**Making Change.**—Hay and Feed Dealer—"You owe me \$3 for oats, Mose, and if you don't pay me I'll have to take your horse."

Uncle Mose—"All right, Mista Guggenheimer, an' Ah'll pay you de balance o' de \$3 jest as soon as Ah kin."—Ayer's Almanac.

**The Fall of Man.**—"Duty calls a man to church on Sundays, and pleasure urges him to go fishing," says a Vermont paper.

And Monday morning he shows up all sunburned.—Boston Transcript.

**Hoped for the Best.**—Judge—"I have listened very carefully to you, Mr. Brown, for an hour, but I am none the wiser."

Counsel (politely)—"I hardly expected your honor to be, but I thought you might be better informed."—The Humorist (London).

**A Warm Reception.**—W. H. P. writes: "A batch of jokes I sent to the editors were rejected as no good, but when I threw them in the stove the fire just roared."—Boston Transcript.



## County Society Reports.

### ATLANTIC COUNTY.

Joseph H. Marcus, M.D., Reporter.

The stated meeting of the Atlantic County Medical Society was held at the Hotel Chalfonte on the evening of December 11, D. Ward Scanlan presiding. The president read a communication from the Nurses' Club of Atlantic City in which they stipulated a definite procedure and formulated new rules which were to be observed by both patients and physicians in the future. As there were certain elements embodied in these new resolutions which would entail hardships upon a certain class of patients, from the monetary point of view, the society felt that it could not adhere to the demands presented. It was unanimously decided that these resolutions could not be approved by the society. Among those who discussed the various phases of the nursing situation were Drs. Lucius F. Donohoe and J. B. Morrison, the president and recording secretary respectively of the Medical Society of New Jersey, D. B. Allman and Edgar Darnall.

Dr. W. Blair Stewart, Chairman of the Committee on Public Health and Hygiene, stated that a series of radio talks would be broadcast by various members of the society. This program is to be inaugurated in January, the committee consisting of W. Blair Stewart, W. J. Carrington and E. H. Harvey. Dr. Edgar Darnall, as chairman, reported for the Library Committee. The Board of Censors reported favorably upon Drs. R. Williams and Robert Kilduffe, who then were elected to membership.

The Scientific Program was presented by Dr. Martin E. Rehfuß, of Philadelphia, his topic being "Practical Dietetics". He presented his subject in a purely extemporaneous manner interspersing his remarks with exhibition of schematic drawings of the entire gastro-intestinal tract and dietetic charts. In outlining the physiology of the gastro-intestinal tract he emphasized the importance of that digestion which takes place in the small intestines, aided by the liver and the pancreas and designated the stomach as the barometer of the gastro-intestinal tract. He divides the various disorders as follows: (1) Stomach disorders, organic in type, such as carcinoma and ulcer; (2) chronic inflammation of the stomach; (3) atony, dilation or ptosis and other muscular defects; (4) reflex conditions. These conditions call for different modes of treatment and here Dr. Rehfuß emphasizes the importance of having a complete knowledge of the underlying condition in the different types of gastro-intestinal diseases. For instance, in atony there is a clear indication for the administration of small and frequent meals, the foods having a relatively short evacuation time. In ulceration of the stomach the fundamental principle entailed in the dietetic treatment comprises: (a) controlling the acid reaction, and (b) controlling the evacuation point. Taking up the broader sense of treatment of ulcer of the stomach and specifying those types in which no mechanical change is present, the process of healing takes from 6 months to 2½ years. With the institution of proper diet there is a relief of symptoms in a few days; it being necessary to eliminate tobacco and have an adaptation to proper food.

As all these cases embody the ambulatory method of treatment it is vital to instill into the mind of the patient the absolute necessity of persistency of treatment and the length of time required. Dr. Rehfuß classifies the percentage of operative results as follows: 88% being suc-

cessful and 12% being failures. In his own series of 200 cases there was 1 hemorrhage and 2 cases of perforation which were complicated by influenza ending fatally. The essential element in the successful treatment of ulcer cases is the adequate teaching of the patient how to live, just as, in a similar manner, the application of insulin in the successful treatment of diabetes. In cases of flatulent indigestion, Dr. Rehfuß stated that the vast majority of these conditions are due to reflex conditions found in the neurotic types and could be relayed from gall-bladder, adhesions, from the liver, etc. He felt that this symptom is purely the result of nerve incoördination.

Discussing the many fads relative to diet, Dr. Rehfuß advised indulging in more sense and less nonsense, with less faddism and more reasonable arrangements of food. He advised the consumption of a lessened amount of food in later life, which is necessary in adjustment to activities, and in the proper control of self; to control the material entering the digestive tract and evolving a dietary scheme satisfactory to the individual requirements.

Those discussing Dr. Rehfuß's subject were: Raymond Reed, Richard Bew, V. Earl Johnson, W. Blair Stewart, Eugene Way, C. J. Larkey, J. B. Morrison, E. W. Torrey, F. R. Corson and D. B. Allman.

### Atlantic City Hospital Staff.

Joseph H. Marcus, M.D., Reporter.

The November monthly meeting of the Atlantic City Hospital Staff was held at the Hotel Breakers on the evening of the twentieth. In the absence of the President, William C. Westcott, the meeting was called to order by Richard Bew, Vice-President. Those in attendance were: Drs. Ireland, Rosenblatt, Allman, Harley, Pennington, Conaway, Senseman, Kaighn, Darnall, Charlton, Barbash, Kilduffe, Davidson, Salasin, Bew, Marcus, Silvers, Andrews, McGivern, Poland, McGeehan.

Reports were outlined by the building, nurses and interne committees. Following dispensation of the routine business procedures Dr. Robert A. Kilduffe, director of the Hospital Laboratory, reported the activities of his department. He stated that his laboratory had acquired a complete set of proteins for sensitization tests. He also stressed the advisability of a more intensive studying of infected cases, both from the medical and surgical standpoints.

The Scientific Program was continued by Drs. Theodore Senseman and C. D. Sinkinson, with the report of surgical service. Dr. Senseman in presenting his service detailed the following statistical service for a period of 3 months. Total admissions 245; total operative cases 106; operative deaths, 8 in number, embraced the following conditions: (1) Ruptured gangrenous appendix with extensive peritonitis. (2) Meningocele, extensive in origin, terminating in a meningitis. (3) Chronic cholecystitis. In this condition Dr. Senseman held that one must bear in mind the cause of death being a possible chronic hepatitis or pancreatitis. (4) Cellulitis of the foot secondary to diabetes, the local infection being streptococcal in origin. In operations of this type Dr. Senseman emphasized the active institution of "Co-operative Practice", stating that the patient should be given a complete medical examination, and proper medical treatment instituted before the patient comes to the operation, there being no doubt that this procedure lowers surgical mortality to an appreciable extent; that the internist



must assume a responsibility equal to that of the surgeon. (5) Carbuncle involving the entire cheek, death being caused by septic meningitis. (6) Fractured skull.

Of the 139 operative cases there were 6 deaths due to the following conditions: Third degree burns, severe crushed wound of the thigh and abdomen, laceration of throat, and, the remaining 3 cases were fractured skulls. In his surgical resumé Dr. Senseman emphasized various points of interest, among which was mentioned the splendid results now obtained in operating upon gangrenous appendicitis, paying a glowing tribute to Dr. John Deaver, that pioneer who blazed the way toward a lowered mortality wrought by the appendix. There are 2 matters involved in lowering this mortality: (1) Improved technic; (2) a broader and more comprehensive phase in draining. In Senseman's method 1 drain is placed in the cul-de-sac below the cecum, resting against the pelvis and so allowing the intestines to be placed above the drain and consequently avoiding a possible strangulation or a minor twist in the gut. The second point in his procedure is placing another drain in the hollow of the nest previously occupied by the appendix, which is next to the peritoneum; if a fecal fistula results there is a well walled-off track and the exit is through the abdominal wall. Concerning fractures of the skull the author eliminated those with compression accompanied by an obvious fracture and said that in the other types there still remains some question of advisability of surgical interference. Due to the vast number of cases of this type of injury admitted to the wards of the Atlantic City Hospital, and furthermore as a result of years of experience in handling this type of cases, Senseman still expressed a doubt about immediate interference. There is ever present a problem in differentiating severe concussion and fractured skull. In the splendid resumé comprising fracture of skull, he concluded that when the surgeon decompresses the skull, drainage must be established, always bearing in mind the question of infection; also, that if there is no relief of symptoms and signs at the time of operation or shortly after, the other side may be decompressed, as not infrequently pathology will be found on the opposite side.

In discussing this paper, Dr. W. E. Darnall emphasized the vast importance of drainage in infected abdominal cases and in so doing to produce as little trauma as possible. Dr. Homer I. Silvers justified the procedure of decompressing the opposite side of an injury if there is no alleviation of the symptoms. Dr. D. B. Allman, entertained a similar attitude with reference to fractured skulls and stressed the importance of a very careful study in those head injuries which present more or less vague symptoms of concussion; he also maintained the rigid adherence to limited interference in gangrenous appendix. Dr. Clarence L. Andrews spoke of the bacteriologic examination of these cases of appendicitis as a valuable guide in prognosis. He spoke of several cases in which a double decompression had been performed as a result of a history of a violent and forcible injury by "contre coup" in which the force of the injury produced pathology on the opposite side.

The program was resumed by Dr. Wm. E. Darnall with a report of the Gynecologic Service for a period of 3 months, during which time 110 operations were performed with a mortality of 3.8%. Following an interesting dissertation on ectopic pregnancy and hysterectomies, the following un-

usual case of "essential abdominal pregnancy" was reported. Patient, colored, female, 27 years of age, married, complained of being sick 3 weeks prior to admission, the permanent symptoms being vomiting, nausea, pain in the gall-bladder area, and an increase in temperature. The history stated that she had one child living and well; no miscarriages; menses instituted when 13 years of age and not infrequently occurring twice in one month. At physical examination the cervix was found to be soft, the right fallopian tube swollen and tender, and a definite and discrete mass was palpated around the liver; Wassermann reaction was negative; urine examination negative; the roentgenologic examination disclosed a series of small ribs under the liver. A diagnosis of "true abdominal pregnancy" was made. At operation a large mass was found under the gall-bladder area with the fallopian tube swollen and bent under this mass and filled with clotted blood as a result of a tubal abortion. Under this mass a dead 4 month fetus was found and with a placenta adherent to the organs in the abdomen. This mass was removed with the tube and ovary, and the area packed with iodoform gauze. In discussion of the treatment, Darnall advised as a general rule to leave the placenta in situ, as removal may produce enormous hemorrhages. In this case, however, the operators felt that the placenta should be removed and with gentle traction this was done, producing very little hemorrhage. Patient made a complete recovery.

In the discussion that followed Dr. W. P. Conaway related a case of tubal pregnancy unruptured, which terminated in performing a salpingectomy. The fetus weighed 5 pounds; the mother recovered. Dr. S. Barbash related a case of cesarian section in which the fetus presented itself following the abdominal incision. The placenta was adherent to the intestines and after its removal a hemorrhage ensued and the patient died shortly afterwards. This case Dr. Barbash had witnessed when an interne some 20 years ago.

Dr. Darnall, closing the discussion, emphasized the incidence of a lowered mortality and morbidity of abdominal surgery resulting from gentle manipulation at all times.

The Scientific Program was concluded by Dr. Homer I. Silvers reporting the surgical service extending from February to April inclusive. Following the reading of statistical reports the following 2 cases were presented:

Case 1. Adult female, admitted with a history of intermittent vomiting; the appendix having been removed several years ago. A diagnosis was made of adhesions around the cecum, confirmed by x-ray study. At operation, many adhesions were found in the immediate vicinity of the cecum which were subsequently loosened. Following operation the patient commenced to convalesce in a normal manner but at the beginning of the fifth day complained of nausea and vomited at intervals. Conditions becoming worse Dr. Silvers felt that the causative factor was adhesions situated in another part of the abdomen and at operation a twisted loop of jejunum was found under the liver causing the obstruction, which was recurrent in nature. Patient made an uneventful recovery.

Case 2. Adult male, traffic officer, admitted with history of being struck by a passing automobile throwing him against a safety isle used for traffic purposes. An abrasion was found on the right side of the head and the patient was in a state of incomplete unconsciousness, soon followed by delirium.

There were no obvious signs of cranial injury; patient was an alcoholic. A lumbar puncture was made and fluid obtained was bloody in character. A request for operation was denied and the patient died. The following is a necropsy report by Dr. Robert A. Kilduffe, director of the Atlantic City Laboratories:

Date of autopsy: 3/5/25; performed one hour after death.

The salient features of this case are embodied in the head findings. There was an irregular and very slightly depressed fracture of the right temporal bone with a large extradural clot measuring approximately 3 in. in diameter. A small piece of bone measuring approximately 1.5 mm. was easily removed from the site of the fracture at its central point, from which radiating lines run out. In the left temporal region, approximately opposite the site of fracture, there was an area of brain tissue of decidedly abnormal consistency, being markedly friable. In this area there was a hemorrhage, a clot of moderate size between the brain and the dura, and an extradural clot larger than that on the right side. The entire brain was much engorged with markedly dilated vessels and the picture was that of meningo-encephalitis, probably of toxic origin. The liver was fatty in appearance, though not to an extreme degree. The kidneys and spleen showed marked passive congestion; the kidneys showed evidence of toxic congestion with a moderate degree of chronic interstitial nephritis. Anatomical diagnosis: Fracture of skull in right temporal region. Softening and tear of brain tissue in left temporal region. Extradural clot, right temporal region. Extradural and subdural hemorrhage, left temporal region. Chronic interstitial nephritis and passive congestion of kidneys. Fatty infiltration of the liver. Passive congestion of the spleen.

Cause of death: Fracture of the skull (right temporal); laceration of the brain (left temporal region); meningo-encephalitis.

It is somewhat difficult to evolve the sequence of events in this case. It is possible that there may have been some degree of meningo-encephalitis of toxic origin which preceded and was the direct cause of the vertigo and fall. The brain laceration and the fracture were probably coincident and associated injuries due to the fall.

The discussions of Dr. Silver's cases were presented by Drs. D. B. Allman, Robert A. Kilduffe, Clarence L. Andrews, Charles B. Kaighn, S. McGeehan, Joseph Marcus and Richard Bew.

Upon proper motion the meeting adjourned.

#### BERGEN COUNTY.

H. B. Wolowitz, M.D., Reporter.

On the evening of November 5 the Bergen County Medical Society did honor to its oldest and most highly esteemed member, Dr. John E. Pratt, of Dumont. Dr. H. Trossbach, of Bogota, President of the society was toastmaster.

Following the scholarly address by Dr. Pratt, some of the guests of the evening spoke. They were Dr. Lucius F. Donohoe, President of the Medical Society of the State of New Jersey; Dr. J. Bennett Morrison, Secretary of the Medical Society of the State of New Jersey; Dr. Gordon K. Dickinson, Chief Surgeon of Christ Hospital, Jersey City; Dr. B. S. Pollak, Chief of Hudson County Tuberculosis Hospital; Dr. Thomas F. Reilly, of Fordham and St. Vincent's Hospitals, N. Y.; Dr. Andrew F. McBride, Chief of the Labor Bureau,

of New Jersey. Dr. G. H. McFadden of Hackensack twice lamented the absence of Dr. G. D. Stewart, of Bellevue Hospital, who was unable to attend. Dr. S. B. Hubbard, of Hackensack, told about shooting a moose, and Dr. T. M. Walsh, of Hasbrouck Heights, told about having to eat some of it.

The affair was a splendid success.

The remarks of Dr. Pratt at the Testimonial Dinner in his honor at The Swiss Chalet, November 5, 1925.

#### Introduction.

Dr. Trossbach: It gives me great pleasure to introduce to you the honored guest of the evening, Dr. John E. Pratt, of Dumont, who is one of our oldest and most respected members and is held in the highest esteem by his colleagues and those



JOHN E. PRATT, M.D.

who have been fortunate enough to know him. He is one of the real type of "The Family Doctor" who is fast becoming extinct. He has been the advisor to the father, mother, sons and daughters in a spiritual, legal, as well as in a medical sense; he shared with them their joys and sorrows, and we are gathered here this evening to show to him our appreciation of his service to humanity,—Dr. John E. Pratt.

#### Reply of Doctor Pratt.

Mr. Chairman and Fellows:

I should be less than human and lay myself open to the charge of being lacking in the common amenities if my heart did not respond in kind and degree to your kindly greetings. If I could give you half the pleasure you seem to have been enjoying during the last hour I should be well content, but this I despair of doing.

I am well aware that it is no professional accomplishment of mine, no special intellectual equipment, no constructive value that I have, which has given impetus to your action in making me a recipient of your friendly overtures.



I know no reason why I should or could claim anything more than your common respect, and I have never thought it any credit to a man to be respected. He ought to be ashamed of himself if he is not. A man who has not the respect of his fellows should go and hide himself in oblivion. So I feel that I am not conceited when I claim your respect. Beyond that I have not been a conspicuous member of your body, nor a constructive force and have contributed little if anything to the value and permanence of the Society. This, then, has not been the reason for your action but solely a desire to recognize my age. Therewith I am content.

It is true that soon my way of life "will fall into the sear and yellow leaf". But even age has its compensations, and it lends value and importance to some things in this world. Centuries ago, somebody used to say, in commendation of age that "it appeared best in at least four things in life—Old wood to burn! Old wine to drink! Old friends to trust! Old authors to read! Solomon, who was reputed to be wise in his day, said that a hoary head is a crown of glory. But no great part of my head is hoary—and the wise man, as if to check an old man's egotism added "if it be found in the way of righteousness".

In a few days our country and many others will be celebrating Armistice Day. I will not attempt to calculate how much importance would be added to that day if the world knew that it is my birthday. In a few days, then, if my tenure holds, I shall be able to look back on three-quarters of a century of life and 48 years of varied experiences in this, one of the noblest of callings.

It would be interesting to review the progress from the crude and often rude procedure of my early days to the scientific precision of today, but that I will not do, but I ask your indulgence while I read some lines I clipped from the Medical Times the other day, entitled—"Doctors—Then and Now" (by L. N.)

In the old days when I had a kink in my system, I went to Dr. Jones.

And he'd tell me to say Oh, and hit me a wallop in the ribs,

And ask how the wife and how the kid was getting along at high school,

And he'd write a prescription,

That tasted as bad as it looked,

And nearly as bad as it smelled.

But it did the trick. — — —

And then, a year or two afterwards I'd pay his bill

After I'd paid every other sacred thing I owed.

Nowadays when I have a pain,

I take it to a specialist.

He has one of those hard-finished white valspar nurses

That scares the life out of me.

She puts me into a card index

With the story of my past life and my thumb prints.

Then she shows me into an inner room.

It's white, too, just like a cafeteria,

Only there's nothing to eat.

And the specialist gives me a cold glance, and says "sit there".

And I sit.

Then he opens up his tool kit and boils his tools awhile.

And when he thinks they are done enough,

He inserts them into my eye, ear, nose and throat.

When they make me squirm, he gives me a dirty look,

And I stop squirming.

And at last he says he thinks he can do something for me

And if I'll have my eye, ear, nose and throat cut out.

And I say I'll think about it.

You bet I will!

And I totter out the wrong door.

But that white, hard-finished nurse retrieves me, And says "That will be ten dollars please".

Anyhow I wish Dr. Jones

Hadn't stopped practicing.

My life has been drab and uninteresting. I was born in poverty and reared by a widowed mother who was left with many mouths to feed. As Kingsley says, "For man must work and woman must weep, And there's little to earn and many to keep."

No sire of renown stamped upon me at my birth the mark of genius; no lineage of nobility except the nobility of character can be traced through my forebears; no nurse sat at my cradle to direct the lowly unattractive beginnings of my life and no wealth pampered me in my early days.

Whatever I am; whatever achievements have been mine; whatever meagre attainments I have reached; whatever moderate heights I have scaled, are due to my own exertions, coupled with the grace of God.

Speaking professionally, the dominant note in my retrospection is a feeling of pride and thankfulness that I have been able to play a little part in the ministry of healing; that I have been not only a devotee but a servant of that art that reaches out a sensitive finger to touch humanity, that ministers to bodies and minds diseased, that brings surcease from pain, hope out of despair and in general has prolonged the span of human life; among the noblest of callings, blessed of God to carry out his beneficent purposes. Now I stand when the end is not far distant. It seems near to me because I have observed, as age ripens time flows on with ever-increasing rapidity, one year following swift on the heels of another. While my concern is with the present and immediate future yet in the "Sessions of sweet and silent thought" I recall the past with its colorful changes, its triumphs and defeats, its smiles and its tears.

I recall a considerable line of colleagues who have wrought well in their day, filled their lives and answered their last call. The memory of some of them is like a sweet perfume, filling with its intangible, insubstantial self the void they left, and I pay my simple tribute to their memory.

Now I will give you a rest if I may paraphrase some lines from a distinguished poet:

After my death, I wish no herald,

No speaker of my living actions

To keep mine honor from corruption,

But such honest chroniclers as you my colleagues and friends.

On December 8, the regular monthly meeting of the Bergen County Medical Society was held at the Hackensack Hospital.



The final revision of the Constitution of the society was accepted subject to approval by the State Society.

Report of case by Dr. G. H. Ward, Englewood:

A child, 4 years old who had swallowed a tack was referred to me for treatment. The tack was located by x-ray in the right bronchus. Removal through bronchoscope was accomplished without subsequent reaction.

The paper of the evening, "Endocrinologic Problems of Puberty", was read by Dr. E. Rodney Fiske, of New York, and discussed by Dr. Diefenbach, New York.

#### CAMDEN COUNTY.

Grafton E. Day, M.D., Reporter.

The regular meeting of the Camden County Medical Society was postponed from December 8 to December 16, at which time the society was the guest of the Board of Freeholders and Managers of the Tuberculosis Sanitarium at Lakeside, where an inspection of the buildings and equipment was made. In the absence of the President and Vice-President, Dr. A. H. Lippincott presided.

After the inspection a dinner was served the invited guests, at which the sanitarium was extolled by leading experts as the last word in modern equipment and plans for the care of the tuberculosis patient.

An expenditure of a million and a half dollars has produced this modern plant where every device and facility is at hand to care for those ill of tuberculous disease.

Dr. Edgar Clement is the medical superintendent.

#### ESSEX COUNTY.

Alfred Stahl, M.D., F.A.C.S., Reporter.

A regular meeting of the Essex County Medical Society was held Thursday evening, December 10, 1925, at 8:45 p.m., at the Academy of Medicine, 91 Lincoln Park, Newark.

The speaker of the evening was Livingston Farrand, M.D., President of Cornell University, who addressed the society about "The Responsibilities of the Medical Profession to the Community". Dr. Farrand advised the profession to get behind all movements which aim to promote public health and to assume the leadership and give the public the guidance it deserves. Unfortunately, he added, the medical profession in the past has not done that. I do not think, Dr. Farrand continued, that the medical profession realizes the complete change which has taken place in the world in the last 30 years. I know we don't realize it in the teaching of medicine. The point of view of medical science has been transformed. Medicine has become a preventive, not merely a curative, science. That fact has not been fully realized by the individual members of the profession. The world is concerned with and medical science must concern itself with preventive medicine. Slow and ponderous is the movement of society in what we regard as progress. It is not interested in groups, such as the medical profession. What it is concerned with is the preservation of its own vitality. Anything which stands in the way of that must, of necessity, go down. It is rare to see organized groups guide such movements of society, yet such guidance is needed. The public is not given the leadership by the medical

profession to which it is entitled. It has not learned to look to that profession for guidance.

Has the organized medical profession stood up in the van in the movement for public health? I am not speaking of individuals, but of the organized profession. As an organization, physicians have held themselves aloof in such movements. It is but natural that the public should turn to other leaders, sometimes false leaders.

The speaker said that the movement toward prevention and spread of tuberculosis had not been initiated by the medical profession, but was energized by the laity. The laity demanded it, and it came, he said. Of course, some of the leaders were physicians, but as a profession, there was no leadership. Dr. Farrand declared that in many instances county medical associations had even opposed some public health movements.

Dr. Farrand was entertained at dinner by the Council of the Essex County Medical Society, at the Elk's Club, before the meeting.

The following physicians were duly elected as members of the Essex County Medical Society: Thompson M. Baird, 782 Kearny Avenue, Arlington.

W. F. Bennett, Essex Mountain Sanatorium.

Karl M. Blum, 310 Main Street, Orange.

Lewis W. Brown, 142 Clinton Avenue, Newark.

William B. Ein, 346 Belmont Avenue, Newark.

J. Field, 608 Grove Street, Irvington.

Arthur Heyman, 175 Clinton Avenue, Newark.

Eugene V. Parsonnet, 777 High Street, Newark.

Edmund E. Sawyer, 24 Johnson Avenue, Newark.

Samuel J. Soschin, 337 Belmont Avenue, Newark.

#### GLOUCESTER COUNTY.

Henry B. Diverty, M.D., Reporter.

The Annual Meeting of the Gloucester County Medical Society was held at Westville, Thursday, December 17, and the following officers were elected to serve for the ensuing year: President: H. W. Stout, Wenonah. Vice-President: W. J. Hollinshed, Westville. Reporter: H. B. Diverty, Woodbury. Censors: James Hunter, Jr., Duncan Campbell and C. B. Phillips. Delegates to State Society: O. A. Wood, Paulsboro. Alternates: E. E. Downs and B. F. Buzby. Member of Nominating Committee of State Society: O. A. Wood.

#### HUDSON COUNTY.

M. I. Marshak, M.D., Reporter.

The Hudson County Medical Society met at the Jersey City Hospital on December 1, with Doctor J. F. Londrigan presiding.

Resolution to petition the Board of Freeholders of Hudson County to appropriate moneys for the maintenance of a Psychologic Clinic to be held in conjunction with the Juvenile Court was introduced and unanimously passed. The Dinner Committee reported that the annual dinner will be held in February.

Dr. J. Morgan Jones' resignation as permanent delegate to the State Society because of having moved out of the county was accepted. Dr. J. F. Londrigan was elected as permanent delegate to fill the vacancy.

Miss Dickinson, of the Metropolitan Life Insurance Company's Nursing Staff was given the floor and spoke of the work of their nursing prenatal and maternity services.

Dr. Nellis B. Foster, Professor of Medicine, Cornell University, Medical College and Chief Medical Officer of the Goiter Clinic at the New York Hospital, spoke on the treatment of Grave's Disease. He stated that they treated about 1000 cases a year at this Clinic, most of which were exophthalmic in type. There were some of the adolescent type in girls and a few colloids. In Switzerland, the exophthalmic type is rather rare. The typical syndrome present is exophthalmus, tremor, goiter and loss of weight. In the atypical type all may be absent except tremor.

Adenoma. This is usually found in women of 35 years or older. There is no treatment in this type of goiter except surgery. The x-rays do not destroy adenoma. This type of goiter gives some response to rest but not to iodine. These cases develop severe cardiac symptoms within a year or so, therefore, surgery should be urged before such symptoms are present. Adenoma is comparatively rare in this district.

Grave's Syndrome or Exophthalmic Goiter. In the treatment of this type of goiter, rest for a long period of time, preferably over one year, is indispensable. By rest we mean complete physical and mental quiet. This type of treatment cannot be carried out very well at home and should be given somewhere in the country and preferably in some special hospital. This treatment should be used before operation in those cases that must be operated upon and also after operation. The marked toxic cases appear very much like manic depressive insanity. They fatigue easily and are extremely restless. Drugs to induce sleep, such as luminal and veronal are used but at times morphin or hyoscin are necessary. "We do not as yet know the field or use or the limitations of iodine in exophthalmic goiter". Iodine has been used by the Swiss for the treatment of goiter for many years. It has seldom any effect in adenoma but in Grave's syndrome, it has a transient beneficent effect for a period of 1 to 2 months. The usual effects of 3 mgm. a day for 10 days consist of slowing of the pulse, proneness to sleep and lessening of nervousness.

Toxic Adenoma. This may be of fetal development or an abnormality of growth of the acini in later life. If hemorrhagic it may become cystic or even calcified. These cases are usually overlooked because exophthalmus is rarely present and because the nodule is small. Goiter may be entirely absent. This condition may go on for years until myocardial degeneration, as shown by fibrillation or tachycardia, manifests itself. Mistakes may be prevented by examining the thyroid in all cases of cardiac disease, with tachycardia, unless evidence of gross pathology in the heart itself is present. Slightly enlarged thyroids in women of nervous disposition resemble Grave's syndrome. These may be excluded by studying the behavior of the pulse while the patient is at rest. Basal metabolism unless done by one skilled in the technic of the apparatus as well as that of quieting nervous patients is useless.

To be of any use the readings must coincide with the clinical impression. The basal pulse rate taken in the morning, with the patient in bed and fasting, and the temperature normal is a better clinical test. If by this test, the rate is between 70 and 80, the basal metabolism is not elevated.

Doctors Nevin, Jaffin, Steadman, J. Shapiro and Rosencranz took part in the discussion. Doctor Foster closed the discussion and answered nu-

merous questions. He said that the only palliative treatment consisted of the use of sedatives and prolonged rest. The prophylaxis of the simple goiter of adolescence depends on feeding iodine; 10 mgm. of iodine given twice a day for 2 weeks in the year is the usual prophylactic course. The use of iodine has practically done away with the ligation operation in toxic cases. The effects of long continued use of iodine are not as yet generally known. The ultimate result of operation and of 1 year of rest are about the same but after operation there is less likelihood of recurrence. The x-ray can produce the same effect as operation but the time factor is uncertain and prolonged.

MERCER COUNTY.

A. Dunbar Hutchinson, M.D., Reporter.

The Annual Meeting with the election of officers of the Mercer County Society was held in the Carteret Club, December 9, at 8:30 p.m. President Haggerty in the chair.

The reading of the minutes of the preceding meeting was dispensed with.

Dr. A. S. Fell, Health Officer of Trenton, was then introduced and gave a short preliminary synopsis on the subject—"Infant Mortality in Trenton".

Dr. Fell confined his remarks to that part of the subject which dealt with the investigations of the Health Department, showing statistics not flattering to the medical profession.

Dr. Florence C. Childs of the Department of Health then demonstrated with charts and figures the sections of the city in which the greatest mortality existed.

Dr. Childs suggested 3 methods by which the mortality rate may be lowered: (1) A larger Health Department; (2) Prenatal care; (3) broader supervision.

These suggestions were discussed in detail, with particular emphasis placed upon the importance of both prenatal and postnatal care.

Dr. Levy, of the State Department was then called upon and impressed the members by an earnest appeal for intensive study of this complex problem, and suggested that some action be taken in the appointment of a committee to confer with the Local Health Department on this subject.

Dr. Costill in very few words stated emphatically that the State Department of Health assumed no responsibility in local health matters; however, if at any time, conditions were of such a nature that the State Department could be of assistance, it was ready to put forth every effort in behalf of the welfare of the community. Dr. Costill expressed his belief in the benefit to be derived from prenatal care.

Commissioner George B. LaBarre, of the Department of Safety, expressed a sincere desire to cooperate in any manner possible that would bring about a more desirable position in the scale of infant mortality than the City at present maintains, and stated that he found the physicians of the City ready and willing at all times, to meet every emergency pertaining to the health of the general public.

Many of the members expressed themselves as being dissatisfied with the statistics quoted, or the method in which the Department had arrived at such discouraging figures. Several emphasized the fact that from a selfish motive alone their own personal reputation as obstetricians and



pediatricians was at stake in the management of both prenatal and postnatal cases. Particular attention was directed to the compilation of statistics based upon all causes of death, without the specific or primary cause being used as a foundation. Relative to prenatal care, every speaker declared that this particular attention was necessary in order that the patient's welfare might be conserved, and proper remedial measures instituted whenever the occasion demanded.

Following a very thorough and conclusive discussion on the part of the Department of Health and the physicians in general, the motion prevailed that a committee be appointed by the President, composed of obstetricians, pediatricians and general practitioners to confer with the Health Department on this important problem.

The resignation of Dr. Henry E. Hale, Jr., of Princeton, was read and accepted. The resignation of Dr. S. M. Shahinian, moved from the State, was read and accepted.

Resolutions on the death of Rufus B. Scarlett, M.D., were read and adopted and copies ordered sent to the family and spread upon the minutes.

Drs. R. B. Seeley and Enoch Blackwell composed the committee.

Drs. Wm. L. Wilbur and C. H. Mitchell, appointed by the Chair, as an auditing Committee, reported the Treasurer's accounts correct in every detail, and that they found the books the best kept of any they had audited.

The following is a list of New Officers:

President: John B. Comfort. Vice-President: John B. Sill. Secretary-Reporter: A. D. Hutchinson. Treasurer: Harry R. North. Nominating Committee: J. J. McGuire. Alternate: C. R. Sista.

Censor: Geo. R. Moore, term expires 1928.

Annual Delegates: D. L. Haggerty, Samuel Sica, Chas. R. Sista, R. W. Davison, F. G. Scammell.

Alternate Delegates: J. S. Vanneman, B. D. Lavine, H. D. Bellis, E. F. Purcell, J. M. Schildkraut.

Following adjournment, a luncheon was served and a very enjoyable social hour indulged in.

#### MONMOUTH COUNTY.

D. F. Featherston, M.D., Reporter.

The One Hundred and Ninth Annual Meeting of the Monmouth County Medical Society was held in Freehold on December 16, at St. Peter's Parish House, where a turkey supper was served to the members. The yearly election of officers always takes place at this meeting and for the next year the society will be directed by: President: Harvey Brown, of Freehold. Vice-President: H. B. Garrison, Red Bank. Secretary: John C. Clayton, Freehold. Treasurer: R. M. Watkins, Belmar. Reporter: Daniel F. Featherston, Asbury Park. Censors: O. K. Parry, Asbury Park; Harold Kazman, Long Branch; and H. Browning Wilson, Red Bank. Delegates to the next State Convention: Irving K. Lovett, Red Bank; Samuel K. Hausman, Red Bank; and Frank J. Altschul, Long Branch. This year Monmouth County, because of an increased membership in the society has an increase of one delegate to the State Convention.

The gathering had the pleasure of having as guests Dr. Lucius F. Donohoe, President and Dr.

J. Bennett Morrison, Secretary of the State Society, who, with Dr. H. O. Reik, Editor of the Journal of the State Medical Society, spoke briefly to the members of the county organization.

The paper of the evening was presented by Dr. Barkley J. Moffat, of Red Bank: "Fracture of the Neck of the Femur". Dr. Moffat discussed the diagnosis and the treatment by the Whitman method and showed the x-ray plates of cases taken before and after treatment.

Dr. Stanley Nichols, of Long Branch, as chairman of the committee on Public Health reported as having, after 5 years' work, reached an agreement with the Monmouth County Society for Social Service so that after January 1, 1926, all the pediatric clinics held in the county under the direction of this society and by the various Child Welfare Leagues will be conducted by physicians of the county. This has been a great undertaking and was made more difficult by the type of opposition encountered and Dr. Nichols was given the thanks of the society for its successful accomplishment.

The question of periodic health examinations was taken up and a committee appointed to have charge of seeing that all the doctors in the county are equipped with the necessary material as furnished by the State Society.

Three physicians were elected to membership: Drs. William Gosling, Red Bank; Arthur Strauss, Long Branch, and Franklin L. Wilbur, Asbury Park.

The retiring president, Dr. William G. Herrman, Asbury Park, was given a rising vote of thanks for the efficient services rendered during his term of office.

#### MORRIS COUNTY.

Dr. Marcus A. Curry, Reporter.

The quarterly meeting of the Morris County Medical Society was held at "Day's", in Morristown, on the evening of December 8. President Glazebrook, as the opening ode of his term of office, was afforded the gratification of presiding over an uncommonly large attendance of members; approximately 50 being present. The attendance and all the events of the evening augur well for a quickened and sustained interest throughout the year.

First rank of interest of the meeting may well be awarded to the address delivered by Dr. Harold E. B. Pardee, Associate in Medicine of Cornell University Medical School and Cardiologist of New York Hospital. The subject was "Certain Cardiac Emergencies and Their Treatment". The paper is promised for publication and while it will furnish its own commendation, it is safe to say at this time that memory does not run back, in the activities of the society, to a manifestation of more intense interest than that inspired by Dr. Pardee. The sentiment of the meeting was well summed up by President Glazebrook, who said: "I am sure you men feel privileged to come here tonight and hear Dr. Pardee's address. It certainly has been a privilege to me; and I think I can say that his talk has been one of the clearest and most helpful that ever has been given to this society. I should like to show Dr. Pardee our appreciation, in the only way we can, by a rising vote of thanks". The animated vote was given with unanimous alacrity.

By invitation of the President, Drs. Krause and



Haven opened the discussion, in which outstanding parts were also taken by Drs. Flagge, Lathrope and Glazebrook. All points raised and questions were clearly and cheerfully answered by Dr. Pardee.

Of more than usual interest in the routine events of the evening was the report of the executive committee read by Secretary Lathrope, which indicated much underlying work done by the committee. Embraced in the recommendations of the executive committee was that of the election of an Historian of the Society so that events and data might be compiled in an orderly manner for historical purposes, inasmuch as the society has been active since the year 1816, well over a century. For this important position the thought of the members rather naturally turned to Dr. H. W. Kice who had been secretary for more than a quarter century and is deemed to be a veritable archive of information. Dr. Kice was unanimously elected Historian.

Another item reported upon by the executive committee was that of a desire of the Visiting Nurses' Association for closer coöperation with the society. This matter is being considered by the committee with the various associations throughout the country and the plans worked out will later be laid before the society.

A communication from the American Birth Control League was also explained by President Glazebrook for the executive committee. Having been deemed as not belonging to the county societies it was referred to the Welfare Committee of the State Society.

Progress was reported by the committee on group insurance, as the committee has not been able as yet to get the necessary information to compile the essential data.

The postal card vote on the "Doctors' Title Bill", up to date, was reported as 43 yeas and 7 nays.

Dr. Flagge having been appointed by the executive committee to prepare resolutions in memory of the late Dr. Bebout, presented and read the following resolution which was unanimously adopted:

#### In Memoriam.

Whereas, The dark angel, Death, has again stepped among us and taken under his sheltering wings to the quiet harbor of peaceful rest, our esteemed colleague Dr. Theodore E. Bebout, who was an honored president of our society; therefore,

Let It Be Resolved, That we do hereby publicly express our appreciation of his sterling qualities: He was a man of refinement and culture; modest to a fault; never self-assertive; deeply imbued with the duties and responsibilities imposed upon him by his chosen and beloved profession; tolerant of the opposing opinions of others and with a heartfelt of charity for the weakness and frailties of humanity. His presence brought sunshine, his smiles sweet balm into the humble homes to which duty called him. We shall miss him many a long day and our sympathies go out to his wife and children. May they see through their tears the nobility of his life as they never have seen it before and be comforted; and

Be It Further Resolved, That these resolutions be spread in full upon our minutes and a copy be sent to his sorely afflicted family who have our profound sympathies.

Pending action on an amendment under consideration to increase the yearly dues of members, the executive committee reported having

authorized the increase for the year 1926 to be paid out of treasury; so that with the adoption of the amendment it will not affect the members until payment of dues, for the year 1927.

Amendments to the By-Laws were given readings as follows: (1) To increase the annual dues to \$15; (2) Providing for the election of delegates in the same manner as officers are elected, instead of in alphabetic order as now provided. These will be voted on at the March meeting.

Dr. Joseph Donovan of the staff of the State Hospital, at Greystone Park, was unanimously elected to membership in the society. One proposal for membership was received and will be acted on at the March meeting.

President Glazebrook announced the plans of the executive committee for the March and June meetings, 1926.

The March meeting in Dover will be given up to a symposium of "Pre-Clinical Signs of Diseases". The papers will be by members of the society and the discussion will be opened by the Executive Secretary of the State Society and Editor of the Journal, Henry O. Reik, M.D. There will be general discussion of all the papers. President Glazebrook stated that in assigning the papers a reservation had been made that if anyone should find it impossible to prepare and read a paper his name will be reconsidered; but at the same time it will be considered a great favor and compliment to the society and the officers of the executive committee if the men who have been given assignments will come forward with their subjects. The following assignments were announced of papers on Pre-Clinical Signs of Diseases. (1) Of the Heart and Circulation, Dr. Larson; (2) Of Fatigue, Dr. Emory; (3) Of Diseases of the Gastro-Intestinal Tract, Dr. Peck; (4) Of the Genito-Urinary Tract, Dr. Thomas; (5) Of Gynecologic Diseases, Dr. Frost; (6) Of Diseases of the Nervous System, Dr. McMurray, of the staff of the State Hospital at Greystone Park.

President Glazebrook made the observation that he thought all should realize that they are in for a pleasant March evening in Dover; that the subjects will be well handled; and predicting a big turn out.

The June meeting is an annual fixture at the Morris County Tuberculosis Hospital (Shonghum Sanatorium) where the society is entertained by the county institutional authorities and for which occasion the address of the day is given by an authority on tuberculosis.

After a meeting of absorbing interest an informal session was held during which refreshments of pleasure of the palate were served in the style so peculiar to "Days", with ample opportunity for fraternizing which was much enjoyed.

#### PASSAIC COUNTY.

Louis G. Shapiro, M.D., Reporter.

The November meeting of the Passaic County Medical Society was held at the Health Center Building, Paterson, on Thursday evening, November 12; 32 members were present. In the absence of the president, Dr. Dingman, the Vice-President, Dr. Chas. R. Mitchell, presided.

The scientific program consisted of a paper on "A New Phase of Surgery of the Genito-Urinary Tract, with Moving Pictures and Animated Film Demonstration", by O. S. Lowsley, M.D., New York. Dr. Lowsley gave a most interesting demonstration: First of the various instruments

employed; second of the numerous pyelograms and cystograms, setting forth a variety of pathologic conditions; third a moving picture demonstration of the administration of local anesthesia for genito-urinary operations proper, a moving picture of the entire operation being technically impossible because of the obscuring effect of blood in the wound.

Dr. Lowsley emphasized his high regard for local anesthesia in genito-urinary surgery. It reduces the postoperative bleeding, postoperative pneumonia, and postoperative ileus to a minimum. The period of hospitalization is appreciably shortened. The patients feel very much better, and, most important of all, the mortality rate is lowered. It is invaluable with prostatic cases. In these, in scrotal and in bladder cases, the anesthesia is complete. In kidney cases, spinal anesthesia is completely effective in only 15% of the cases. The remaining cases must have their anesthesia reinforced in some way.

The society was greatly interested and Dr. Lowsley answered many questions, after giving his paper. A rising vote of thanks was given Dr. Lowsley.

A letter from the State Welfare Committee asking that our society express its sentiments as to just what further action, if any, be taken by the State Medical Society with reference to the "Doctor's Title" Bill was read and discussed. After the discussion it was regularly moved and passed that the State Society be requested to reintroduce the bill.

Dr. Marsh brought up the question of ventilation in our newly erected public schools and emphasized the poor ventilation obtained in spite of the installation of costly mechanical apparatus and requested the society to take some action. Dr. Lee and Dr. Spickers confirmed Dr. Marsh's views. After some discussion, it was regularly passed that the president appoint a committee to appear before the Board of Education and present the society's views on school ventilation.

Dr. Mitchell appointed the following committee: Dr. Marsh, Chairman, Drs. Spickers, Lee and Clay.

The December meeting of the Passaic County Medical Society was held at the Health Center Building, Paterson, on Thursday evening, December 10, 51 members and 7 guests present. Dr. Thomas A. Dingman presided.

Dr. Gerald J. Van Schoot, Jr., 245 Lexington Avenue, Passaic, was readmitted to membership, and the following new members were elected: Lawrence B. Boylan, 360 Main Street, Paterson; S. M. Giambra, 23 Church Street, Paterson; Samuel Kleiner, 229 Broadway, Paterson; Florence Slaff, 18 Bloomfield Avenue, Passaic; Gay Bong Kim, St. Joseph's Hospital, Paterson.

The society was fortunate in having two excellent papers for the evening.

Dr. Sidney Yankauer, New York City, gave an address entitled "Some Phases of Rhinology of Special Interest to the General Practitioner".

Bronchoscopy: The general practitioner is most familiar with bronchoscopy as a means of removing foreign bodies. The best treatment is of course the prevention of inhalation or swallowing of these substances. These accidents are practically always unnecessary, the result of carelessness or foolishness. Another item that deserves attention is the instruction of mothers to avoid leaving open safety pins about in the nursery. A safety pin once removed from a child's clothing, should be closed. A closed pin swallowed

by a child can cause no harm. A swallowed open safety pin presents difficulties and dangers in its removal.

A case was cited to emphasize the importance of x-raying the body from the nasopharynx to the anus in looking for a foreign body. A cervical mass with fever in a child was diagnosed as a new growth probably springing from the lung. An x-ray of the chest was negative. Some time later, a second x-ray, which fortunately included the cervical region, revealed an open safety pin in the upper esophagus.

Bronchoscopy is also of value as a means of diagnosis as well as a method of treatment, particularly in lung abscess.

Focal Infections: The teeth, tonsils, and sinuses must be considered as possible sources of infection, in the order given. The secondary symptoms when the teeth or tonsils are at fault are usually joint, muscular or cardiac involvement; when the sinuses are responsible, general debility and lack of vitality are complained of. If more than one infected focus is present, the teeth should be attended first. If no result is obtained, then the tonsils and, finally, the sinuses.

Tonsils: Ordinarily, the tonsils should disappear during adolescence, and therefore an adult should have no tonsils. Every adult large tonsil is diseased and is a potential source of danger. This does not mean that every adult should have his tonsils taken out, as tonsillectomy is not an entirely harmless procedure, especially under general anesthesia, when the operation becomes a major one, with all its dangers. One does not lightly do a major operation under general anesthesia in the presence of an infection in the respiratory tract, no matter how slight. The danger in doing a tonsillectomy under general anesthesia is much greater, the possible result being pulmonary abscess. The latter occurs more frequently than is generally recognized. About one-third of the lung abscess cases get well without reaching the chronic stage. The remaining cases can be helped greatly by bronchoscopic irrigation. The great majority of these get well if treated within a year.

Tonsillectomy in adults should be done only under local anesthesia. Under such circumstances, it is a minor operation, free of the danger of infection. The sepaer is so convinced of this, that he refuses to accept cases for tonsillectomy in adults who insist upon having general anesthesia. Under local anesthesia, the operation is easier and the bleeding is less because of the upright position. If the patient gags very readily, the gagging can be overcome by training.

As some of the members stated that they were unable to obtain complete local anesthesia, Dr. Yankauer detailed his method which has been completely effective. The points to be injected are swabbed with 20% cocaine. Dripping is avoided by touching the swab to a towel. The nerves emerging from the posterior palatine foramen are first anesthetized by the injection of 1 c.c. of 2% novocain at a point 1 cm. in front and 1 cm. above the posterior margin of the gum. Here the bone is about 1 cm. beneath the mucous membrane, and the direction of the injecting needle is important. The shank of a straight needle is rested across the tongue and the injection is made from the opposite side of the mouth. This gives complete anesthesia of the upper two-thirds of the tonsil in a few minutes. The lower third of the tonsil is anesthetized by direct infiltration with 1% novocain without adrenalin. The use of adrenalin may cause troublesome after-bleeding. About 1 c.c. is injected into the pos-



terior pillar at the junction of the middle and lower third. At the lowest point, where the plica meets the lateral pharyngeal wall another 1 c.c. is injected, and then through the anterior pillar at the junction of the middle and lower third an injection of 1 to 2 c.c. deep into the capsule is made. This gives good anesthesia except for the pain during application of the snare. This, it has been learned, comes from pulling on the anterior pillar, and is avoided by an injection at the base of the anterior pillar where it meets the tongue, making a good bleb that extends onto the tongue.

No lung abscesses ever follow tonsillectomy under local anesthesia. A few rare instances of pulmonary infarction with bloody expectoration have been recorded as occurring about the third day after operation, caused by embolism when the clots are still loosely attached within the veins.

**Sinuses:** The middle meatus of the nose constitutes the main channel for the inspired air, and the lower edge of the middle turbinate bone receives most of the organisms inspired. This middle meatus constitutes a "vicious circle" in that the slightest swelling here, causes blocking of all the sinuses communicating with it. Of all paranasal sinus disease, ethmoiditis is the most common. It is present more frequently than is generally known. Antrum sinusitis has diminished considerably in frequency with the development of better dentistry, so that antrum disease is now secondary to ethmoiditis. Ethmoiditis causes a blocking of the nasofrontal duct. A vacuum develops in the frontal sinus, with pain similar to that occurring in the middle ear when the eustachian tube is closed by swelling. Rhinologists have learned that pain over the frontal sinus is usually due to vacuum and not to sinusitis.

**Location of Headache:** Most cases of frontal tenderness are due to vacuum in the frontal sinus. Ethmoid headache is felt in the temples, while sphenoid headache is felt in the nape of the neck. Antrum sinusitis gives pain in the cheek, but occasionally there is no pain over the cheek because there is sufficient opening into the nose to discharge, but incidental swelling of the naso-frontal duct with closure causes frontal vacuum headache.

**Therapeutic Test for Acute Sinusitis as Cause of Headache:** An inhalation of steam is given. The head must be held over the steam for 5 minutes after perspiration has begun. If the nose discharges mucus and the patient feels better, the headache is certainly due to sinus involvement. Very hot and moist air causes excessive shrinkage of the turbinates with relief for several hours and at times with complete relief. There is no more efficient method of treatment. The routine is the following procedure repeated every 2 hours: The nose is sprayed with a weak solution of cocaine and adrenalin and 5 minutes later a steam inhalation is given. The inhalation is continued for 5 minutes after the head has begun to perspire profusely. Then a hot douche of normal saline is given. With such therapy, the usual case of sinusitis gets well in 2 days. The treatment fails when the inflammation is so intense that the tissue will not shrink.

Chronic Ethmoiditis must be treated operatively, but with conservatism, i.e., the mucous membrane of the cells must not be completely removed. Yet every cell must be opened more than half its diameter. If a single unopened cell remains, suppuration of all the other cells, even

though opened, will follow. Complete cures, with relief of headache and discharge and without any need for further treatment is obtained in 80% of the cases. No deaths nor complications, such as brain or orbital infection has occurred. This is in sharp contrast to the older method of curettage with debris left in the nose and packing inserted. The more thoroughly the ethmoid is curetted, the less likely it will get well.

Dr. Donald B. Gordon, of New York City, gave a paper entitled "Principles of Treatment in Spiral Fractures", the text of which Dr. Gordon was kind enough to forward and which I am herewith enclosing. (To appear later in Journal).

#### SALEM COUNTY.

William H. James, M.D., Reporter.

The regular meeting of the Salem County Medical Society was held on the afternoon of December 9, at the Salem County Memorial Hospital, Salem, N. J.

The meeting was called to order by Dr. C. L. Fleming, the president, of Penns Grove, N. J. After the regular order of business was completed, Dr. Edward Klopp, of Jefferson Medical College, Philadelphia, gave a talk in "Diseases of the Rectum and Anus".

The various diseases were mentioned and their symptoms and treatment discussed, such as hemorrhoids, fistula in ano, stricture of rectum and ulcer. Carcinoma should be diagnosed early; carcinoma of sigmoid is very difficult to diagnosis as the symptoms do not appear until the disease is well established.

The delegates present from Gloucester County were Dr. Samuel Ashcraft, of Mullica Hill, and Dr. Frank Fishler, of Clayton. There was a fair attendance of the members who took part in the discussion of Dr. Klopp's paper.

The next meeting will be held the second Wednesday of February, at the hospital.

#### SOMERSET COUNTY.

Dan S. Renner, M.D., Reporter.

The regular meeting of the Somerset County Medical Society was held November 10, Vice-President Ten Eyck in the chair, Dr. Wild being absent on his vacation.

Several interesting cases were discussed, after which the meeting adjourned.

#### WARREN COUNTY.

F. A. Shimer, M.D., Reporter.

The Warren County Medical Society met at the Hotel Belvedere, Belvedere, N. J., on Thursday, November 12, 1925, this meeting being the One Hundredth Anniversary of the founding of the society. After enjoying a special turkey dinner, in celebration of the event, the members listened to the reading of an historic review of the society's proceedings, presented by Dr. G. Wyckoff Cumming. (The Address will be published in full in the February Journal.)

Among the distinguished guests present, and who delivered short appropriate speeches, were: Lucius F. Donohoe, President of the New Jersey Medical Society; J. Bennett Morrison, Secretary of the New Jersey Medical Society; Henry B. Costill, Director of the State Board of Health; Dr. Estes, President of Northampton County Medical Society, Pennsylvania; J. E. Fulper, of the Hunterdon County Medical Society.

## Abstract Report.

### Fifty-first Annual Meeting, New Jersey Sanitary Association

Berkeley-Carteret, Asbury Park,  
December 4 and 5, 1925.

#### Presidential Address.

Charles W. Crankshaw.

The presidential address notes as the high peaks in the 51 years of the society's progress the following achievements: The comfort afforded the public in the practical and scientific construction of tubes, tunnels, subways, and other means of travel marking especially the problem involved in disposing of gas from the exhausts of motors using the vehicular tunnel between New York and New Jersey. The benefits derived from industrial hygiene, child hygiene and social hygiene, as exemplified in the Better Babies contests, the activities of the welfare departments of the large corporations, the education of the public in regard to preventive medicine, municipal supervision of milk and food supplies, the protection of the sources and guarding of the supply of drinking water. The appointment of a committee to deal with the sewage and garbage disposal in New Jersey, as well as of a similar group to carry on the work of mosquito extermination, which has been proceeding with gratifying results. The cutting down of infectious disease by means of education of the laity, notably in prenatal, child hygiene, and tuberculosis clinics. The open-air schools and preventoriums for tuberculous patients and the comforts afforded them through the sale of Christmas seals; also the pleasure derived by them from the radio facilities provided by a large telephone company to make their convalescent exile more bearable. The benefit to the sufferer from diabetes through the discovery of insulin, and to the goiter patient from research work on the ductless glands. The work of the health officer, social worker, industrial surgeon, school inspector, nurse and state in preventing blindness. The more sensible dress of today, especially that of women, as permitting straighter posture, greater freedom of movement and more comfort.

"In a world of great unrest today, let us stand four-square, with body erect, eyes front, chin up, back straight, chest out, and look the whole world in the face, knowing that as hygienists, sanitarians, engineers, teachers, artisans, physicians, surgeons, nurses, lay-workers and others, we are doing our best to teach the present and oncoming generations that it is their duty to fear God, obey the laws of nature, think straight, and so live that the generations following them will be a healthy, happy and wholesome human family."

#### Address on Industrial Hygiene.

Andrew F. McBride, M.D., Commissioner of  
Labor of the State of New Jersey.

That the dusty trades do offer unusual risks to health has been so well-established by statistical observation as to make almost unnecessary the mention of the experience of the Trades Union Anti-Tuberculosis Association of Newark. This organization, which has about 12,000 members,

provides food, medicine and nursing service for members who become tuberculous, and its records and extreme humidity make the most frequent demands upon its resources. Undoubtedly the problem of factory ventilation is the most serious that confronts any department of labor, for if this problem is once solved a long stride will have been taken in the direction of preventing occupational disease.

The Safety First movement was the practical answer of industry to an aroused public conscience that demanded fewer accidents and safer premises for labor, and the beneficial results that have followed the development of this idea have shown the enormous possibilities that undoubtedly lie in intelligent health supervision as applied in a broad way to the industries of the nation.

The basis of industrial prosperity is production, and factors which interfere with production attack the very life of industry. There is no sound reason, therefore, why advantage should not be taken of the information made available by modern medicine that attempts to quicken the productive energy of the working force by helping the workers to keep themselves fit. This can best be done by (1) providing pleasant work rooms; (2) providing appliances for lessening manual labor and reducing fatigue; (3) providing appliances for removal of physical hazards; (4) providing intelligent and sympathetic, as well as efficient, supervision; (5) conducting an educational campaign for health and safety among employees in coöperation with the health department; (6) coöperating with the health departments in any work of an investigative or research character; (7) establishing a hospital, or first aid division, within the plant or conveniently situated thereto.

Every manufacturing plant should have some form of medical relief available to employees. A larger factory should install a dispensary in charge of a trained nurse, who could utilize a part of each day in home visitation, looking after absentees. Absenteeism has been greatly reduced where this work has been carried out in an intelligent manner. A large factory should also have a physician who is always on call and who could devote part time to a study of the plant conditions and processes, determining the hazards connected with each process, as well as the type of employees best suited to each phase of the work. Physical examination of all employees should be carried out periodically. A number of small plants located close together might join in the establishment of a central dispensary in charge of a nurse with a doctor on call. The necessity for this kind of work is given emphasis by the report of the Bureau of Statistics of the Department of Labor of New Jersey, which states that 25,000 minor accidents were reported during the fiscal year ending June 30, 1919, which did not cause the loss of one day's time; 17,304 nonfatal accidents, causing a loss of one day or more, and 332 fatal accidents. Five deaths resulted from wounds becoming infected.

In 1911 the state legislature passed a law authorizing the Department of Labor to issue mandatory orders requiring employers to correct ventilation condition when the air breathed by workmen was polluted with industrial dust, noxious fumes or excessive heat. Employers have assisted in this work in a most commendable manner, realizing that the physical care of the worker is now ranked as a matter of fundamental importance and is placed in the same business



columns with the items of wages, hours of labor and production. Furthermore, experience has shown that even costly alterations in plant equipment tending to improve labor's condition are satisfactory investments.

Another consideration of first magnitude, and before which in the final analysis all other interests must yield, is the fact that a maimed worker is a poor social asset and a distinct loss to the community. The community has therefore given concrete expression to this interest, either by the creation of labor laws or the establishment of industrial boards which are invested with sufficient authority to make safety rules that have the force and effect of law. In the enforcement of such mandatory legislation the department of labor has called into service the technical and engineering experience of the industrialists of the state and has prepared a group of industrial safety standards covering the felt hat industry; lead corrodors, lead oxidizers, paint grinders, etc.; the manufacture of insecticides; the manufacture of lithopone; the use of cutting oils, and steam power laundries. An occupational disease investigating committee prepared the draft of a bill, which later became a law, providing for the payment of workmen's compensation in a selected group of industrial disease causes. These included anthrax, lead, mercury, arsenic, chrome, benzene, phosphorus and wood alcohol poisoning and caisson disease. A solemn reciprocal obligation requires the workmen engaged in the dangerous trades to coöperation with plant managements to the fullest extent, and for the encouragement of all concerned it is gratifying to note that experts familiar with this subject believe that a man's occupation should cause no deterioration of his health, but should, by the interest it arouses in productive effort, inspire him with enthusiasm for life and its manifold responsibilities.

#### Current Administrative Problems in Communicable Disease Control.

Louis I. Harris, M.D., D.P.H., Director Bureau Preventable Diseases, Department of Health, New York City.

The author presents, without any effort at sequence, a few of the problems that seem to him of special interest or importance in the field of communicable disease control.

(1) **Conveyance of infections by certain foods.**—Because the tendency nowadays is to intensify efforts in the prevention of communicable disease by means of specific immunizing injections, it is well to emphasize the fact that we cannot afford to neglect the supervision of methods of food handling and distribution that may introduce massive doses of virulent strains of disease breeding organisms. While pasteurization destroys the bovine bacillus, the manner of handling milk and butter and other dairy products in retail stores and restaurants, and the unsatisfactory methods of washing soda-water glasses and spoons in the myriad of food-serving soda counters, are definitely potential sources for the spread of respiratory infections. (2) **The reporting of suspicious cases of the acute communicable diseases.**—Doctors should be encouraged to report every notifiable case on the first suspicion of its presence, with the definite understanding that if the suspicion is not borne out, isolation and other restrictive quarantine procedures will be immediately and in good faith discontinued.

(3) **Doctors, when delinquent, to be judged by their peers.**—A radical change for the community good would be effected if influential members of the medical profession would consent to be conscripted for service as purists in order to pass on instances of neglect in their professional brethren.

(4) **Bedside nursing care in communicable diseases.**—From every standpoint public health departments have much to gain by providing such service for indigent patients. It may be instrumental in saving lives and it may make hospitalization with the attendant risk of transportation, etc., unnecessary. Such a service would require a large enough staff of nurses to enforce quarantine. (5) **A new mode of statistical classification of communicable diseases.**—We do not get an idea of the magnitude of the problem in certain communicable diseases as they affect various large groups because we estimate morbidity rates in terms of the general population. A more accurate proportion would be presented if we estimated the number of certain cases per thousand in children under five, and in children under ten years of age. (6) **The national pacesetter.**—In this connection it is urged that the United States Public Health Service, acting in an advisory capacity and as an interpreter of current scientific judgment, not only establish standards, but wage a relentless campaign of education to secure the conformity by all states and localities of such standards, in order that the duration of quarantine, methods of disinfection and other basic principles or procedures be made uniform throughout the country. (7) **The problem of dealing with whooping-cough.**—In regard to this question the author recently proposed to the New York Academy of Medicine that a commission be appointed to represent the Health Department and those members of the Academy as leaders in pediatrics, to determine upon a flexible method of control suitable to the needs of the patients, to the rights of private practitioners, and, above all, adequate for the protection of public health. Under present conditions children go about in public during the height of the disease, attend dispensaries and clinics where they come in contact with other children and spread disease. (8) **Typhoid fever of unknown origin.**—The percentage of such cases in many communities is a challenge to, if not a reflection upon, the epidemiologic service of the health departments of the larger communities especially. This matter is broached as an urgent problem calling for conference and consultation by public health administrators. (9) **Preventing cardiac and degenerative diseases.**—A moment's reflection will make it obvious that a number of cardiorenal affections, which incapacitate and throw on the industrial scrap heap large numbers of young persons, and which prematurely shorten lives, have their origin in the acute communicable diseases, especially the exanthemata. Intelligent coöperation of an official nursing staff with the family physician in giving suitable nursing care, and more effective measures for prevention of the spread of infection would surely have a bearing upon the so-called "rising tide of heart, kidney and arterial diseases" which we cannot ignore.

#### Administrative Health Practice.

Paul Preble, Surgeon U. S. Public Health Service.  
Office of Administrative Health Practice.

In the evolution of public health administration there are 3 rather distinct phases which

serve to indicate the prevailing tendencies: (1) suppression, which began with the efforts of the early boards of health to combat epidemics by quarantine; (2) prevention, following the rise of the germ theory of disease, and attendant upon the discovery of the specific agents of many of the contagious diseases; (3) health promotion, in which the pendulum has reached a position about midway between environment, on the one hand, and the individual, on the other.

The recent survey of the 100 largest cities undertaken by the U. S. Public Health Service, compared with the survey of 83 cities in 1920, confirms many of the former findings and leads to the inevitable conclusion that health department methods should be given a thorough housecleaning with the view of encouraging a more general use of a common language with universally accepted definitions, uniform requirements and a singleness of purpose. The requirements in respect to any particular disease differ so widely in different cities as to incite lack of confidence on the part of the public in regard to the essential principles of isolation. In the case of smallpox, for instance, the legal detention period in Detroit and Albany is 4 days, while in Scranton it is extended to 30 days, and in Springfield, Mass., to 42 days. Whooping-cough is isolated in Toledo for 14 days, in Boston 21 days, in Baltimore 28 days, in Spokane 42 days, while a number of cities require the traditional 6 weeks. These defects in the practice of isolation are illustrative of the urgent need for careful revision along other lines, such as the plan or organization of municipal health departments; uniform health records; the proper use of case cards, maps and charts; principles of epidemiologic study; the theory and practice of isolation (including placarding, concurring and terminal disinfection, control of contacts, carriers and missed cases, and immunization); organization of public health nursing; infant welfare and preschool age supervision; school health supervision (including correction and prevention of defects, health and sex education, and special provision for handicapped children); reasonable standards of milk control; the theory and practice of food inspection, its influence upon health and the value of medical examination of food handlers; the function of health agencies; the influence of nonmedical cults and antisense propaganda. An Appraisal Form for City Health Work has finally been devised and adopted by the American Public Health Association and the American Child Health Association. It represents the first really serious attempt on a large scale to apply the score card scheme of evaluation to city health work. Among the items already standardized are certificates of birth and death; methods for control of communicable diseases, for the bacteriological and chemical examination of milk, and for bacteriological examination of shellfish; the international list of causes of deaths; a model law for morbidity reporting; score cards for dairies, and standards for the purity and potency of drugs, vaccines, sera and similar products. Further experience with the appraisal method will be required to determine its usefulness.

In addition to revision of many procedures and so-called standards now in use, the future development of municipal health work will depend largely upon the perfection of the technic of popular health education, and this will rest with the ability of the health agencies to gain the public's attention. The experience with life-extension studies of presumably healthy persons appears to indicate that the number of those who

are actually enjoying good health is relatively small, and our attention is often called to the high percentage of physical and mental defects disclosed by the examination preliminary to military service and in school health work. The fact that the individual is a very essential factor in determining the health of a community has fortunately become recognized. Civil authorities have provided academic facilities for centuries, but they have neglected to include even reasonably adequate provision for health education, either compulsory or optional. Popular health education must develop an appeal to the individual that will encourage him to want to understand and practice the principles of hygiene, to the mutual advantage of himself and his community. Hurried methods, short cuts and spectacular appeals will not be profitable. Direct personal contact seems to be essential and in this line there is no agent so effective as the public health nurse. The logical supervisor of public health education is the health officer, who should of course use every available agency for promoting this activity. In the progress that is made, however, the individual must carry a greater burden and assume greater responsibility.

#### The Position of the Health Department in the Securing of a Safe Milk Supply to all the People of our State.

James D. Brew, Professor of Dairy Extension, Cornell University, Ithaca, N. Y.

During the last 50 or 75 years the United States has shifted from an agricultural to an industrial nation. There was a time, within memory, when there was no municipal milk problem, as such. The consumer purchased the milk from a neighbor who owned a cow, and the milk was never more than a few hours old when received. The source of supply may now be 10 to 100 miles from the market, and the milk may be from 20 to 70 hours in reaching the consumer. How best to organize and administer the sanitary control of city milk supplies is a perplexing question. It is held by some that such control should be vested in the State Department of Health, with absolute power to formulate ordinances and to enforce them. This proposal has two sides. Providing politics could be eliminated, centralization of authority would gradually result in uniformity of city milk ordinances, which is desirable. The danger, however, would lie in the almost inevitable tendency to compel all municipalities to adopt the same ordinance. Centralization would also be met by a certain amount of resentment at distant points, which would result in inefficiency from lack of coöperation.

In regard to the securing of a safe milk supply, the function of a state department of health is, briefly, to study the problem of milk control in a broad way and to place the facts in the hands of each local health official; to help each municipality in making a study of its own milk problems and then to advise regarding the most workable ordinance to meet that particular situation. The principle of standardizing ordinances so that the same type of ordinance is to be enforced in all cities, irrespective of size or conditions, is fundamentally wrong. The function of the State Department of Health in its relation to each local is not to usurp power or to duplicate work or to compel a particular milk ordinance or procedure, but, rather, to collect facts, to advise, to supplement and encourage. The



principle of a state-wide ordinance is right as a guide, but it must be flexible.

In addition to protecting the health of the consumer, the Health Department must keep in mind the economic welfare of the producer and distributor. The unfortunate tendency on the part of some health departments to add from time to time new requirements, many of which are based on whim rather than fact, is a constant source of annoyance to the farmer. When the health department coöperates with the dairyman who is making an honest effort we find that the rank and file of producers ardently support the principle of safe milk. From the consumer's point of view the health department will be held responsible for the implication that exists in ordinances that Grade A tuberculin tested raw milk is safer than Grade B tuberculin tested raw milk. The price for the former is usually greater than for the latter but no one could ever prove a greater margin of safety for one over the other. The health department will also be held responsible for sanctioning so-called "baby milk", and for the fact that the two so-called grades of pasteurized milk come from the same vat, and that the actual differences in quality between the two grades, bottled honestly and strictly in accord with the requirements of the ordinance, is not sufficient to justify the difference in price. There are wide variations in the quality of milk sold by different distributors in any one city, and the consumer has a right to know who the distributors are that are complying with the provisions of the local ordinance.

In brief, the three most important conditions which any health department should strive to meet are these: (1) To adopt a policy which aims to protect the producer and the distributor of milk who makes an honest effort to meet requirements, and to eliminate the careless individual. (2) To adopt a policy of milk control which protects the consumer from unfair and dishonest manipulation of quality labels and which keeps the consumer informed regarding the sources of supply which are being sold in accordance with the ordinance requirements. (3) To gather all facts possible regarding problems of controlling milk supplies, and then in the light of these facts to lead fearlessly.

#### **Rabies, Its Incidence, and Practical Experience With Canine Anti-Rabies Vaccine.**

J. V. Mulcahy, Chief, Bureau of Bacteriology, New Jersey State Department of Health.

The object of this paper is to call attention to the very serious situation which exists in this state in respect to rabies; also to present evidence of the value of antirabic vaccination of dogs as a means of controlling this situation, either as a compulsory measure or in conjunction with strict quarantine and the destruction of all stray dogs. There has been a steady increase in the number of cases of rabies in dogs in this state during the last 5 years, the records showing that rabid animals were received from municipalities in 20 of the 21 counties. It is not possible to determine the number of persons bitten by rabid animals, as "dog bite" is not reportable in this state, but from available data between 250 and 300 persons were obliged to take the Pasteur treatment in New Jersey during the year 1924. Many other eastern and southern states are facing the same problem. In Connecticut, however, where the disease had been wide spread in 1922, there was

not a known case in March, 1924. This freedom is attributed to a change in the method of control, which was started in 1922; it provides that if an animal has received antirabies vaccination it would not have to be destroyed, and that if a dog which had been bitten by a rabid dog and received, within 3 days from the time it was first bitten, the first injection of antirabies treatment, such animal being held in quarantine until it was released. In writing by the Commissioner of Domestic Animals, it would not have to be destroyed. Previous to this procedure, when quarantine regulations were enforced, all dogs that were known to have come in contact with a known rabid dog were destroyed.

Similar favorable reports on the effectiveness of antirabic inoculation of dogs are received from those municipalities in our own state where this method of control has been practiced. Results in Japan, where a few years ago rabies was rampant, are most satisfactory and under a revised law it will now be possible to enforce compulsory inoculation there. Experimental work in the United States shows that distinct protection is afforded dogs against rabies by the one-injection immunization method. It would therefore seem from the evidence afforded by the use of this method in Japan, Connecticut and New Jersey, that immunization of dogs by antirabic vaccine is the best practical method of controlling and eradicating the disease.

The vaccine for dogs is prepared from the brain and spinal cord of a rabbit dead of fixed rabies infection. "Fixed virus" designates rabies virus which, by repeated passage through rabbits, has attained a high virulence for rabbits, killing them in 7 days, but has become much less virulent for other animals and man. This fixed virus is the same material properly attenuated, that is used in the Pasteur treatment of rabies in man. For dogs this fixed virus is ground in a mortar, and to this ground-up mass 4 times its volume of phenolized glycerin water is added, this consisting of 60 parts of glycerin and 40 parts water which contains 1.25% carbolic acid. The mixture is thoroughly stirred and allowed to stand in the ice box for 30 days, when it is ready for use. Immunity so conferred will last in the large majority of cases for at least one year.

Treatment with antirabies vaccine is an inexpensive, simple, painless procedure and no valid objection can be raised to it on the ground of cruelty as has been the case with muzzling. Under the present law the responsibility for enforcement of the control of rabies in this state rests entirely upon each local board of health, which is seriously handicapped unless it has the hearty coöperation of municipal government in carrying out the necessary constructive measures. A quarantine order or an order to muzzle dogs always meets with opposition and is indifferently enforced in most places. Moreover, these procedures do not protect a community very long if rabies exists in an adjoining town. The method of compulsory vaccination would save the lives of hundreds of animals, many of them valuable. It would also spare the human victims of rabies the cost, anxiety and suffering entailed by the 21 injections required in the Pasteur treatment, which even then is not infallible. The objections to the preventive treatment of rabies raised by a few voluble persons who make inaccurate statements have been responsible for the repeal of ordinances in Atlantic City and Westfield, which required compulsory vaccination of dogs against

rabies, and have also prevented the passage of similar ordinances in other municipalities.

Appreciating the seriousness of the present situation in respect to rabies and the difficulties confronting local health officials in instituting and enforcing adequate control measures, the Director of the New Jersey State Department of Health has prepared a bill which was introduced during the last session of the legislature, providing for the preventive vaccination of dogs against rabies before a license could be obtained. Unfortunately this bill failed to become a law. Should another such bill be introduced during the next session of the legislature, provision should be made for the licensing of all dogs, so that the preventive inoculation of dogs would apply to many communities that have no local ordinance requiring the licensing of dogs. Provision should also be made for the destruction of all unlicensed dogs.

#### Pollution Affecting the Waters of the State.

J. Ralph VanDuyne, Chief Engineer, Passaic Valley Sewerage Commission.

The scope of this paper is limited to the pollution of the Passaic River and tributaries between Great Falls at Paterson and the mouth of said river at Newark Bay. In the early nineties attention was called in reports to the Board of Health of the city of Paterson and to the State Board of Health, to the unsanitary condition of the river, and out of these demands for relief from an intolerable situation the Passaic Valley Sewerage Commission was finally launched. After many trials, the trunk sewer and its attendant works, composed of 41 miles of sewers and including three pumping stations, were put into operation in the late summer of 1924, thirty years after the relief was first demanded.

History informs us that the Passaic was once a fair and pure stream. With the advent of industrial plants along its banks the river gradually became the natural drain for industrial and domestic wastes. It is doubtful if there is such an enormous and varied industrial waste pollution elsewhere, concentrated into a portion of any river, as in the district we are now considering. There are textile wastes from silk manufacture and dyeing, wool washing and dyeing, dyeing and bleaching of cotton, and the dyeing of velvet and fur. There are wastes from paper and cardboard mills, from slaughter houses and rendering plants, from tanneries, chemical works, metal plants, gas works, plaster manufacture, stone sawing and polishing, rubber manufacture and other forms of industry. Many of these wastes are noxious and foul and capable of offensive putrescence. A very heavy burden which the river has also carried has been the domestic sewage from a number of the larger cities and towns in the vicinity. For more than a year, however, the larger part of this sewage has been diverted from the river by means of the trunk sewer interception.

In the regeneration of this stream the Passaic Valley Sewerage Commission, besides being charged with the operation of the great sewer and the disposal of the sewage carried therein, has also the administration of the law forbidding the pollution of the Passaic River and its tributaries in the specified district. Final notice to stop pollution was served on the industrial concerns, many of which had their sewer connections already made; others are in various stages toward completion. Some concerns have in-

stalled purification plants, others are experimenting to discover the best method of treatment. The manufacturers have in most instances shown wonderful coöperation, especially when it is realized that the necessary changes and the expert advice have cost many thousands of dollars. There is also the item of the daily maintenance, which means a chemical bill of some size in a plant whose volume of waste water runs from 1 to 20 million gallons daily.

It is too early to discuss the progress of the river toward its future regeneration, but even in this first year of remedial measures the stream has reflected a change and it may well be expected that the Passaic will eventually come back into its own.

#### Federal Phase of Protection of the Shellfish Industry.

C. E. Waller, Surgeon, U. S. P. H. S.

Effective sanitary control of the shellfish industry must embrace at least 2 requirements: (1) The beds from which the shellfish are taken must be free from pollution with pathogenic organisms or other offensive material, and (2) the methods of handling, subsequent to removal, must be such as to prevent contamination or deterioration.

While the federal government has exclusive jurisdiction over tidal waters and navigable streams in certain respects, it is doubtful if this jurisdiction extends to the control of the shellfish-growing areas. The matter of sanitary control of these areas must therefore rest, for the present at least, in the hands of the producing states. The Public Health Service will continue to render assistance in the making of surveys and investigations, however.

The shipping and handling of shellfish within the state of origin must also be controlled by the state, but where shipments are made in interstate commerce the federal government has very definite authority. The Surgeon General of the Public Health Service is authorized to cause inspections to be made from time to time of beds, shucking houses and other places where shellfish are grown or prepared for interstate shipment, and he is further authorized to forbid the interstate shipment of such shellfish as may become agents for the spread of disease. The Public Health Service has also undertaken the systematic survey of the machinery and efficiency of sanitary control of the shellfish industry maintained by the authorities of each producing state, upon which a system of interstate certification of shippers is based.

The main point to be made is that since the actual control of shellfish-growing areas and shipping establishments must be exercised by the states, the protection of the shellfish industry from a sanitary standpoint must remain largely a matter to be handled by the producing states with such assistance and coöperation as can be given by the federal government.

#### Sanitary Supervision of the Shellfish Industry.

By the New Jersey State Department of Health.

John E. Bacon, Chief, Bureau of Chemistry.

The shellfish removed from the waters of the State of New Jersey are valued at approximately \$10,000,000 a year, and the powers of supervision of this industry are vested in 2 state departments, the Department of Health and the Bureau of Shellfisheries. The former has to do with the



sanitary control, and the latter deals with the commercial development of the industry. With the exception of milk, the oyster is probably one of the most valuable foods obtainable. It contains 20 to 25 per cent. meat solids, being fairly high in fat, protein, glycogen and all mineral substances characteristic of sea water. It is particularly high in vitamin and iodine values, the latter being about 1000 times the amount contained in other foods.

The areas where natural sets of oyster spat occur are owned by the state and are called public seed grounds. Dredging by any Jerseyman is permitted here during the months of May and June. As the salinity is low in the waters over the seed grounds, oysters do not mature very fast, and it is customary to dredge the spat and transplant it in other waters which have a greater salt content. These transplantal grounds are owned by the state and are leased to individuals at a yearly fee. After being transplanted to leased grounds, oysters require 2 to 3 years to mature to marketable size. They are then brought in from the bays to the mouths of small streams, where they are placed upon floats for 24 to 48 hours, during which time they are cleaned of mud and sand. They are then taken to the shipping wharves.

The oyster is a concentrator of the finely divided materials in the water and if the water is polluted by sewage and contains harmful bacteria, these will likewise be found in the oyster. It has been variously estimated that an oyster passes from 15 to 50 gallons of water through its system per day, when actively feeding. This fact makes quite apparent the necessity for careful supervision over the sanitary conditions prevailing in shellfish culture. The shellfish act passed by the legislature gives the State Department of Health ample powers to make the necessary sanitary surveys, bacterial and chemical examinations of water and oysters grown therein for the protection of the public, as well as for the abatement of pollution of shellfish grounds. This work has been carried on for a period of 12 years and this state has the reputation of being in the lead in shellfish sanitation. The law gives the inspectors of local boards of health the power to arrest anyone removing shellfish from condemned areas, with 30 days imprisonment for a second offense.

The department permits only up-to-date and sanitary places in which the shellfish products may be opened and packed. New Jersey was the first state to require all persons engaged in this industry to submit samples of stools and urine for bacteriological examination for the purpose of detecting typhoid carriers. It is now necessary for all shippers doing an interstate business to receive certificates from the state authorities, this certificate being approved by the Public Health Service, which acts as a clearing house for improvements in the industry and furnishes such information to all states and Canada. It is safe to say that sanitation in the shellfish industry today is on a higher plane than has ever existed before.

#### **Treatment of Sewage and the Pollution from Ships and Trade Wastes.**

George W. Fuller, Consulting Engineer,  
New York.

The discharge from ships and from industry may cause damage to the public health through

bacterial contamination or chemical decomposition; to fish by physical, chemical or biological changes; to boating through physical and chemical changes; to hunting through destruction of various forms of animal life; and to bathing through the production of objectionable physical and chemical effects. The problem of the control of these difficulties involves technical, legal, administrative and financial details. Inasmuch as many of these problems involve streams and harbors which are not limited by the boundaries of a single state, we are confronted with the necessity of setting up legislative and administrative procedures for the control of interstate problems. Whether such interstate problems should be the subject of interstate or federal legislation is a matter for careful consideration.

Unfortunately we do not have such successful administrative procedures with reference to similar wastes which emanate from ships. In recent years the most damaging discharge from ships and industries has been in the form of oil, which results in the destruction of fish eggs, in the coating and destruction of aquatic vegetation, in the reduction of the aëration of the water and the consequent retardation in the oxidation of the sewage; in interference with all bottom forms of marine life, as well as with bathing and boating facilities. So extensive has been this particular form of pollution that it was followed by one of the most concerted attacks on a source of pollution that has ever occurred in this country or any other. In fact, the problem soon became an international one, the result being the passage in the United States, Great Britain, the Netherlands and several other European countries of stringent federal oil-pollution acts. Skimming tanks, large enough to allow the waste to be detained sufficiently long for the oil to rise to the surface, are feasible as a remedial agent.

There are, of course, dozens of other examples of pollution by industrial wastes of one sort or another, and as new problems arise new processes are developed. Industrial wastes can be treated so as to eliminate nuisances, other than for waterworks intake, methods of purification being generally similar to those employed for the treatment of municipal sewage—screening, sedimentation, filtration and the activated sludge process. Whether it is cheaper to purify industrial wastes at the point of origin or to discharge them into municipal sewers and then allocate the cost, is a question upon which opinions vary. A recent arrangement provides for a two-story settling tank, so that in the lower compartment the sludge is digested and the gas vents covered by suitable collectors to permit of gas utilization. Such tanks are now being built at New Castle, Pa., and are under investigation at Chicago and a number of places in Europe. The gas resembles natural gas with about 75 per cent. of methane, and the volume varies with the temperature, averaging  $\frac{1}{2}$  cubic foot or more per person daily. This gas, as in the Essen district, may be sold to local gas companies or used for power production.

It is encouraging to know that sewage purification practices are much better crystallized today than ever before, and there is no reason for hesitancy on the part of the public authorities. The extensive undertakings at Chicago, with the operation of activated sludge plants at Milwaukee and Indianapolis, furnish experiences and records which adequately light the way for future undertakings as to sewage purification, provided the necessary administrative and financial steps are first established.

## Death.

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COLES, J. Ackerman.—At Scotch Plains, on December 16, 1925, Dr. J. Ackerman Coles, distinguished surgeon and philanthropist, passed away after an illness of about 3 weeks' duration. Born in Newark, May 6, 1843, the son of Dr. Abraham Coles, he had attained the age of 82 years but his usefulness to the community and to the state of his birth is not to be measured by such small figures. He had retired from the active practice of medicine some years ago but the latter years of his life were spent as actively in promoting the many philanthropic interests in which he had engaged. His interest in the field of Foreign Missions, in Homes and Hospitals for Children and Orphans, was most extensive and there was scarcely a limit to his labors in the field of education and of art. His gifts to the City of Newark, to its Library and Museums, were of great value. He had devoted much thought, study and money to collecting rare pieces of art and literature and it is said that his home at "Deerhurst" was adorned with paintings, tapestries, bronzes and marbles collected from nearly every part of the world. From this collection he had given most liberally for the benefit of humanity through churches, libraries and museums.

He was graduated from Columbia College in 1864. He then began the study of medicine and surgery in his father's office and entered the College of Physicians and Surgeons, New York. He was graduated in 1868, served in the New York, Bellevue and Charity hospitals, and practiced for several years.

In 1877-78 he attended lectures and clinics in London, Edinburgh, Paris, Berlin, Heidelberg and Vienna. He next visited Syria, Palestine and Egypt, after which he became associated with his father in the practice of medicine and continued to follow this profession in Newark and Scotch Plains.

He was a permanent delegate to the New Jersey State Medical Society, a member of the American Medical Association, a member of the Washington Association of New Jersey, a life member and trustee of the New Jersey Historical Society and a fellow for life of the Metropolitan Museum of Art, New York. He was a member of the National Geographical Society, of the Anglo-Saxon Society of London and Copenhagen and an honorary member of the Newark Museum of Art. He contributed to the press, wrote verses, published articles on medical and educational subjects and edited later editions of his father's works.



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## TAXATION AND ITS EFFECTS UPON PRESENT DAY ESTATES.

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There exist in America at the present time two types of economic values which indeed bear serious study. These are: (a) Property Values, and (b) Human Life Values.

*"Property Values* comprise land, buildings, machinery, equipment, raw materials, finished goods, and business good will. The fact that they are tangible in character, and easily comprehended, have made these material things for years regarded as capable of scientific organization and management. They are, therefore, subject to appraisal. They are also recognized as subject to immediate or ultimate loss. Scientific use is therefore made, as a matter of ordinary business precaution, of the principles governing depreciation, sinking funds and contracts of indemnity."

*"Human Life Values*, contrary to those qualities mentioned above, consist of character, industry, technical and managerial ability, power of initiative, and judgment of individuals. The abstract, if you will, as opposed to the concrete above. They have heretofore been regarded as intangible, economically indefinite and difficult, if not impossible, of scientific treatment."

With the lessons so admirably evolved for us in the field of property values, however, and with the information compiled from this source as a guiding factor, may not life values

be treated equally as scientifically and be made equally as tangible and definite? For instance, with respect to many classes of men, the life value would be made up of practically all of their business worth. This is particularly true of those engaged in professional or expert work. The fact remains that the loss of life value almost invariably means a total loss of the capitalized worth of the individual.

It has been estimated that the life values in the United States, capitalized at an ordinary rate of interest, would be 6 to 8 times that of property values. Surely such a predominant element in our national economic wealth is worthy of scientific consideration. The appraisal of human life values constitutes a very practical inquiry. How may one fairly capitalize his or her human life value and having accomplished this, what further thought should be given to protecting that value from undue shrinkage in the face of present day inheritance tax laws, both state and federal?

One of the important factors to be weighed in the appraisal of human life values is the earning power of the individual. The accumulative period of the average American usually begins at the age of 30 and continues to the age of 55 or 60. It is during these years that one must build up an estate that will protect not only himself during the dependent period of his life, but also his family in the event of his premature death or disability. There are 2 methods of capitalizing human life value and creating an estate during these years. One is through systematic saving, the other is through the creation of an estate by life insurance and then saving it by the regular deposit of premiums. Every estate builder should choose early

in life one or both of the plans suggested and then proceed undeviatingly along that path.

### *What We Will Do With Our Estate.*

When one is forming plans for the creation of an estate, it is equally important to form plans for its conservation for the benefit of one's family. This problem involves the distribution of property. How is such distribution to be perpetrated under present day laws, both state and federal?

In considering this problem, it is helpful to consider the amounts derived from the 2 different methods of accumulation—the saving method and the life insurance method—as 2 different estates. Savings and investments, it can readily be seen, may be taken care of by your will. (The effect of taxation on these will be covered more thoroughly below). The distribution, on the other hand, of an estate of Life Insurance may be effected (1) by your will; (2) through a lump sum payable direct to the beneficiary; (3) through a life insurance company in monthly or annual payments; or, (4) through a bank or trust company in accordance with the terms of a Life Insurance Trust.

Life insurance made payable to one's estate, and, therefore, distributed by the will of the insured or by the "Statute of Descent and Distribution", in the event of one's dying intestate, is subject at once to court costs, the New Jersey Transfer Inheritance Tax, and the Federal Estate Tax, should the estate exceed \$50,000 which is the exemption allowed. Insurance made payable in a lump sum to a named beneficiary is entirely free from the New Jersey Transfer Tax and exempt from the Federal Estate Tax if the amount of insurance does not exceed \$40,000. With reference to lump sum payments, however, there are several pertinent facts which deserve consideration. Life insurance in force, excluding fraternal and other such insurance, has increased from \$15,555,000,000 in 1914 to the vast sum of \$56,903,000,000 at the close of the year 1923, and in 1924 to the sum of \$65,000,000,000. During this same period, payments for death losses and matured endowments have increased from \$282,798,000 to \$563,708,000. Statisticians, moreover, tell us that of the claims paid for death losses in the year 1923, approximately

90%, or \$378,000,000, was paid out in lump sums.

In connection with the above, consider that it has been estimated that the people of the United States lose, through fraudulent investment concerns, at least one billion dollars annually. Numerous newspaper clippings corroborate this. One selected at random from the New York Times of April 26, 1924, says, "Billion a year lost in bad securities—described as a 'Tidal Wave' by bankers planning to safeguard investors—rich men among losers—protection of depositors from speculators a duty, saving conference is told". It is fair to say that a percentage of the monies paid by the insurance companies, as shown above, in lump sum settlements of their contracts to beneficiaries who are mostly widows and children, is reflected in these losses. It is easy to picture, the insurance check and a stock prospectus arriving in the same mail.

Consider the vastness and importance of this and ask yourself if the income or estate you leave will follow a downward curve, representing a decrease such as is the case in 9 out of every 10 estates of \$5000 and over in 7 years.

If it is true that life insurance policies constitute approximately 81% of all property left by persons dying in the United States, I think it proper to suggest that life insurance that replaces your income should be paid out as income and not in a lump sum. No one who has intelligently scrutinized the trend and tendency of the past few years, and who can visualize even dimly the future, will dare deny that, from the standpoint of economic conservatism, lump sum settlements do not go far enough. *They provide money, but not money management.* It has been with the desire to adjust this situation that the life insurance companies and the banks of America exercising trust powers, have made careful and suggestive studies along these lines. Many life insurance companies have provided in their contracts that the proceeds may be left on deposit and paid out in a limited number of ways.

It is interesting to note that the insurance companies will not permit proceeds of policies to remain on deposit where they will be required to exercise discretionary powers. In illustration of this point we need only mention the



education of children or the advancement of principal in extraordinary cases. The banks of America have put forth with the approval of the National Association of Life Underwriters, a life insurance trust plan, which is supplemental to the plan of the life insurance companies. Under such a Trust, life insurance policies may be made payable to a bank or trust company acting as Trustee under a Trust Agreement. For example, the agreement may instruct the Trustee upon the death of the insured to collect and invest the proceeds, the income therefrom to be paid to the widow until her death or remarriage, and upon her death or remarriage to continue such payments to the children (or pay and expend the same for their maintenance, education and support should they be minors) until they reach the age of 25 or 30, at which time their share of the principal will be paid to them or their issue should they predecease the time for distribution. It is advisable in many instances to permit the Trustee to exercise discretionary power to pay and expend the principal or a part thereof for illness or the education of the children of the insured or any other unusual need or emergency provided, in the judgment of the Trustee, it is advisable to do so. The plan outlined is generally referred to as the Unfunded Life Insurance Trust Plan, and permits the centralization of all insurance policies in one common fund. An added factor is that it enables dependents to deal with one source rather than many: Further it enjoys the same tax exemptions as policies made payable to a named beneficiary in a lump sum. That is, it is exempt from court and administration costs, from New Jersey Transfer Inheritance Taxes and from Federal Estate Taxes up to \$40,000.

To illustrate how this plan works in actual operation, let us take a recent case which was handled by a certain trust company. A man called on them and stated he owned \$25,000 of life insurance, which was practically his entire estate. This life insurance he had made payable to his estate. He had made a will. This provided that the insurance money was to be held in trust. The income, and not in excess of 2% of the principal per annum, was to be paid his wife as long as she lived; and thereafter, the income and, if necessary, part of

the principal was to be used for the education, maintenance and support of his children until they reached the age of 25, at which time they were to receive their share of the principal outright. The issue of any deceased child was to receive the parent's share. This arrangement assured protected management for the insurance money. It safeguarded the family's financial welfare. It was, moreover, far superior to having the insurance paid to the family in a lump sum. However, it was not the most economical way to accomplish these things.

Without changing the protective features of the program in the slightest degree, an Insurance Trust arrangement was suggested. Its economic advantage can best be shown by the following comparative table:

Plan Whereby \$25,000 insurance is made payable to estate.	Plan Whereby \$25,000 insurance is made payable through in- surance Trust
Executors fees (fixed by statute) .....	
Miscellaneous ex- penses .....	
New Jersey Transfer Tax (wife and two children) .....	
Trustees fees (fixed by statute) payable on termination of Trust .....	
Miscellaneous .....	
	Trustees fees (fixed by agreement) pay- able at termination of Trust .....

A small fee is collected on the income each year, but it is the identical amount in both cases.

The above is applicable to the distribution of an estate created through life insurance; the distribution of that portion of one's estate created through savings and investments is comparatively simple in that it can be done in one way only, through a will. The protection of such an estate, however, is sometimes difficult and involves many factors. In general, the average man may be said to regard his estate as being made up of 4 sections, the first representing liquid assets—prime, marketable, and salable; second, the semi-liquid assets—business interests, real estate, and securities of close corporations; third, "speculative" holdings—including real estate, stock and bonds held for a rise; and fourth, the life value asset or the personal earning power of the individual. All of these various assets have as their natural center and purpose—the home,

the rock foundation upon which our nation is built.

The public at large seem unaware of the fact that the inheritance tax or death duty exists as a very formidable tax which is still making progress in this country. They fail to realize that with death the picture changes to one which involves their estate in proceedings with "Tax Bureaus that are chronically swamped", and in place of the Utopian ideal they had conceived, a last analysis produces a result wholly foreign to their expectations.

The fourth type of asset, the life value asset or personal earning power, is entirely destroyed by the death of the individual, and instead of the estate of the average man being tied up to the home, as he had fully anticipated, it may be pictured as being tied to a building which we will assume represents the Capitol at Washington and the capitol of the state of domicile, each of which drops a line to encircle the entire estate with a first mortgage lien for taxes that must be paid.

Inheritance Taxes have not attracted the interest and attention given to the income tax. There are 7,000,000 income tax payers, whereas only 12,000 to 13,000 estates are affected each year, so far as the federal government is concerned.

The average American citizen's estate accumulates liabilities immediately upon his death. These may be referred to as the "Five Cash Obligations". They are: (1) State Inheritance Taxes; (2) Federal Estate Taxes; (3) Accrued Income Taxes; (4) Administration Expenses; (5) Just Debts.

A brief survey of just how these "Five Cash Obligations" affect estates is interesting. Records taken from reliable sources show that in estates ranging from \$5000 to \$5,000,000 shrinkage is evident, but it is significant that the owners of small estates portray very much larger amounts of ready money than the large ones.

Turning to figures to substantiate this matter of the shrinkage of estates from \$5000 to \$5,000,000, it will be observed that in the estate which involves \$5000 the percentage of shrinkage is 37.5, the residue being 62.5. The cash content in the \$5000 estate is 41.2% and out of this must be met the following ex-

penses: taxes, 1.3%; administration expenses, 16.2%; and debts, 19.9%. In the estate which involves \$500,000 the percentage of shrinkage constitutes 19%, the residue 81%. The cash content of the \$500,000 estate is but 3.8% from which must be paid, for taxes, 8%; administration expenses, 4%; and debts, 7%. The estate of \$5,000,000 fares much worse than the former two. The shrinkage is smaller, 24%, leaving a residue of 76%. The cash content in such an estate is 2.4% which must meet 16.5% in taxes, 3% in administration expenses, and 4.5% in debts.

It is observed that the item of taxes is, of course, small or insignificant in small estates, but the principal item of shrinkage in the larger estates. Administration expenses, on the other hand, are necessarily large in proportion to the smaller estates, but a very small part of the shrinkage of the large estate; likewise debts, the last month's bills, expenses of the last illness—comprise a large part of the expenses of the small estate and a negligible part of the large. In many of the smaller estates, the cash item is large because it constitutes perhaps almost all the estate, with the exception of the household furniture and a few personal effects.

Numerous other examples of shrinkage in estates of \$2500, \$50,000, \$100,000, \$1,000,000, and \$10,000,000 could be cited similar to the above 3 estates. Again, as in the 2 later cases above, it is noted that in no estate over \$100,000 is the cash left sufficient to provide for any one of the 3 items of shrinkage—administration expenses, debts, or taxes—and that it is utterly insufficient to liquidate all of them. It would seem obvious to the casual observer that more cash should be available to protect the estate against the shrinkage which is inevitable.

The average man imagines that the debts, administration expenses and taxes will take a portion of his liquid assets, his semi-liquid assets, and his "speculative assets to meet payment of these claims, but experience shows that the funds to meet these immediate cash demands for inheritance, federal taxes, and other expenses must frequently be raised by forced liquidation and the sale of the most desirable securities, at a time, perhaps, when a "bear market" exists. Apropos of this is an



illuminating statement from the Wall Street Journal. It says, "Estate Taxes have made it dangerous for persons of wealth to die, except in a 'bull market' and unless a large part of their estate is in liquid form". Many cases have arisen whereby this situation has prevailed. Instead of an equal sector of each class of assets of a man's estate being removed, by inheritance taxes, federal taxes and the like, the very heart of it is extracted. Taxes skim the cream off a man's estate. They leave him with the best of his liquid assets, his best securities—gone.

As a solution to this situation, a plan may be worked out whereby life insurance money equal to the taxes the estate must pay may be made available to the executor. This plan will enable the average man to keep his family estate intact. Instead of taxes eating the very heart out of the estate, the life insurance will counterbalance the taxes and other expenses. In other words death that creates the liabilities at the same time provides an asset—cash—with which to make payment of the same. Elihu Root has made an admirable summation of the situation. "I have come to the distinct conclusion", he has said, "that by far the best and indeed the almost only practical way of guarding against the possible ruinous loss of a forced sale of securities for the purpose of paying various estate and inheritance taxes which are imposed nowadays, both by the national and state governments, is by means of insurance, which for a moderate annual payment, will insure the sum necessary to pay such taxes without sacrifice of the securities".

In some instances, an estate created by savings and investments can be protected by a rearrangement of investments. Not only is a tax imposed by the federal government and the State of New Jersey, but most states impose a tax on that portion of a nonresident's estate located within its borders or subject to its jurisdiction. Thus it is that approximately 80% of the states impose a tax on stock of a corporation organized under its laws, although the decedent is a resident of another state and the stock certificates are not physically located within the taxing state. If a corporation is incorporated in more than one state—some railroad companies are incorporated in as many as six—each of these states may im-

pose a tax. For example, the New York Central Railroad Company is incorporated in New York, Pennsylvania, Ohio, Michigan, Indiana and Illinois; waivers are required in New York, Pennsylvania, Ohio, Michigan, Indiana, and Illinois; and there are tax proceedings both federal and in the states of New Jersey, New York, Pennsylvania, Ohio, Michigan, Indiana and Illinois. While it is true that all states may not assess a tax, nevertheless the expense to the estate is sometimes considerable. In this connection let me quote President Coolidge. "Particularly is this (administrative) expense disproportionate to a tax paid by a small estate which has but a few shares of stock. In many cases the expense alone may exceed the total value of shares which it is sought to transfer." Numerous other examples of the same nature could be cited. Is it not clear that securities that may be suited to one man from an inheritance tax standpoint may be entirely unsuited to another living in an adjoining state?

The result, as can easily be seen, is multiple taxation and has been referred to by expert tax men as the quagmire of inheritance taxation. It is certainly unfair on principle that the same asset should be taxed several times, but such is the veritable condition as it exists today. The reason why this situation exists and promises to become worse is because inheritance taxes have not as yet attracted the attention given the income tax. The effect of taxation may be minimized by judicious selection of investment securities, in some cases involving the advisability of sale of securities already held and the reinvestment of the proceeds in a more suitable security from the tax standpoint.

That this question of taxation requires our deepest consideration goes without saying. A few of the salient points have been touched upon in connection with the above suggested plan, which may prove helpful. Each one of us, in the face of present day taxation and its effect on estates, should give the subject the attention it deserves while we, the creators of the estates, are alive. A feasible plan should be worked out for the protection of one's estate and by so doing safeguard the future happiness and prosperity of those who place their dependance upon us.

## PERIODIC EXAMINATION OF THE APPARENTLY HEALTHY.

C. R. O'CROWLEY, M. D.,  
Newark, N. J.

President's Address, Essex County Medical Society, October 6, 1925.

One year ago you honored me by bestowing upon me the highest office in your power, and for me to say how highly I have prized that distinction would be putting it mildly.

Increasingly, year by year, county societies have considered and worked out health problems for the betterment of community life, with a large measure of success and gratifying results. This society represents organized medicine in Essex County and we have assumed definite obligations. The prosperity and happiness of our inhabitants depends largely upon how well we assume the rôle of Health Guardian.

The paramount method of conserving public health is for this society to work in co-operation with other agencies, such as the Antituberculosis League, state and local Health Departments and lay welfare units, to disseminate the knowledge of usefulness and necessity for periodic health examinations. Personal missionary work on the part of physicians to their patients will be of untold value. Whether you term it The Care of the Apparently Healthy, Community Health Service, Preventive Medicine, Individualized Longevity Promotion, Pre-clinical Medicine, Health Survey or Periodic Health Examination, the object is the same.

At the St. Louis meeting of the American Medical Association, in 1922, the House of Delegates made it incumbent for the members to devise some means of providing examinations for the apparently healthy and a part of the resolution contained the following: "That the county medical societies be encouraged to make public declaration that their members are ready and prepared to conduct such examinations, it being understood that the indigent only shall be examined free of charge and that all oth-

ers are expected to pay for such examinations."

Examinations of the apparently healthy have been carried on for quite a few years. We have had healthy infants brought to the different infant welfare units and the older children have been examined upon entering school. Even some universities and colleges examine their students upon entrance. Many industrial plants have their employees examined when they enter their employ and, in some cases, at stated intervals thereafter; to the policy holders in some insurance companies a physical examination at stated times is offered. In some of the large cities, a few dispensaries have made provision for periodic health examinations.

There is greater need for men and women of 50 or older to present themselves for such examination than those of a lesser age; likewise for those engaged in occupations involving strenuous mental effort, long hours of work each day, or occupations attended with great financial risk.

The advantages to the working classes are obvious from reading the bulletin of the National Industrial Board, Inc. Industry values the health of its workers. Talk to a man who has been in the army, and he will tell you that at no time of his life was his general health more scrupulously looked after than while in the service. Likewise, employers are concerned over the well-being of their employees to a degree where the question might well be raised whether if, in an up-to-date industrial plant, the worker's physical well-being is not often better protected than it is in his home or wherever he may spend his leisure time.

Much possible damage to health and the productive capacity of both the individual worker and the nation at large, is obviated by physical examinations. Naturally, not all applicants for work are in perfect health. Many have minor ailments that can be corrected, but are not known to them until they are examined when asking for work. This often results in making a sound, 100% worker out of one previously able only to do little or but a moderate amount of work, to the detriment both of himself and of



productive power at large. Defective teeth, bad tonsils, defective vision and curable skin diseases, for instance, are cases in point. Again, physical examination will uncover some chronic defects which do not entirely bar the applicant from work but require that he be given a specific kind of work which he can do with least injury to himself. Arrested or cured tuberculosis, varicose veins, flatfoot, high blood pressure, kidney and heart disease are in this class. Other defects, not always known to the worker himself, such as defective eyesight, defective hearing, or heart trouble might well present danger to the safety of other workers and the plant if the worker is placed on a job apt to place strain on the organs involved.

Physical examinations, therefore, are an insurance and protection to all workers and to the industrial establishment as a whole. As a result of such examinations, many men and women suffering from one defect or another, who otherwise might not have been able to hold a job, or only a poorer job, are enabled to hold good jobs where their particular affliction does not interfere with the work. The survey of the Conference Board, as far as completed, indicates increasing employment of such "substandard" workers, which is equivalent to a fuller utilization of the available productive power of the nation, and means a livelihood for many a man or woman who otherwise would be dependent on others. Objections to physical examination by employees and applicants for work are practically nil, the board's investigation indicates.

In January of this year, Dr. Bertram Bryant of Bangor, Maine, read, by invitation, a very worthy paper upon the subject of health examinations before this society and his conclusions were as follows:

"The intelligent class of people, I believe, are more impressed with the value and importance of this work than the rank and file of physicians themselves. They want to keep well, and prefer, on the whole, to be taught how to keep their organs in a healthy condition than to have them rejuvenated even by the most scientific of modern processes.

Upon the general practitioner will fall the necessity of doing the greater part of this work, and on the whole he is the man best qualified by actual experience to do it.

Any plan of examination to succeed must be simple and the one best adapted to his needs and equipment.

He should be given every possible help through clinics and postgraduate courses to fit himself to make better and more comprehensive physical examinations of all who come to his office.

He should be assured of ample financial compensation for his work.

This is a campaign of education and to succeed it needs the coöperation with the physicians of all those agents and organizations that are working for health.

It must of necessity be carried on for such a period of years as will guarantee to all who wish sufficiently thorough physical examinations to keep them at their highest efficiency, the proper facilities to obtain them."

Organizations have been started, and have commercialized in an unfortunate way, the splendid thought that periodic health examinations are very important. It is our duty, through this society, through papers and editorials to annihilate the commercial effort that is being propagated throughout this country in regard to health examinations. The House of Delegates of the American Medical Association has already taken a decided stand against the broker or middle man who sells medical service to the public. One of the largest insurance companies has found it profitable to expend money for periodic examinations of its policyholders. The prolongation of life by this means has saved in death losses more than the expense of the examination. If the death rate is reduced, so also must be the sickness rate and to a much greater extent.

This movement is becoming a national one so rapidly that it behooves us to put a little stimulus to our efforts and into an endeavor to demonstrate to ourselves the real value of these health examinations. I would suggest that a special meeting of this society be called to demonstrate to members

the practical application of periodic physical examination, such as was carried out by the Kings County Medical Society of Brooklyn upon more than 90 of its members. They had all their doctors try it first. Which one of us doctors has been examined in the longest kind of time? None of us. We are examined all right when we are sick; that is, we are sometimes examined.

At the conclusion of the examinations of the doctors of the Kings County Medical Society almost every deviation from normal to be expected in a group presumably healthy was encountered, although comparisons with other series of examinations by the United States Public Health Service and by insurance companies indicates that the physicians rate better in "health" than other corresponding age groups. Whether this is due to the infrequency of bad mouth conditions and constipation in the list of "defects" found is a natural question. Contrary to the usual experience, hypotension was frequent. Physicians, knowing blood pressure apparatus and technic, are not nervous. If pressure is susceptible to variation, it behooves the health examiner to weigh cause and effect in order to avoid wrong deductions, which might result in useless if not actually harmful advice. One physician was able to raise his pressure 30 by smoking a cigarette. That physicians, despite irregular hours of work, deviation from routine as to meals and sleep, and less systematic exercise and recreation than is usually considered advisable, rate so high in health would seem to indicate that, subconsciously at least, physicians practice what they preach. In summarizing, the report points out that the physicians in Brooklyn are in better general condition than other groups of men in the community, although, on the basis of the group examined, one-third might well practice "girl control." The significance of such findings as hypotension or poor muscle tone need scientific investigation. Methods of sizing up psychologic soundness need to be developed. The medical service requires making health examinations require not only time but also discriminating

to interpret rightly the significance of various minor findings in relation to habits of living.

District councilors should be instructed to keep this subject in all of its advanced phases before the different societies under their jurisdiction. Health talks by competent authorities should be broadcast over the radio, as the Philadelphia County Medical Society is doing at the present time.

Your Committee on Periodic Health Examinations has done a vast amount of work in the past year and they have had excellent coöperation with the Antituberculosis League, and I wish to thank them publicly now on behalf of the society with the hope that they will be continued in office to complete the fine work they have started. This committee is ready at all times to study, plan and conduct activities in this work in any way that the society may direct and will welcome any suggestions from the members.

The slogan: "Have a health examination on your birthday" should be ever in our mind.

Remember: He who cures disease renders a service, but he who prevents disease renders a greater service.

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## THE TREATMENT OF ANGIO-NEUROTIC EDEMA.

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WILLIAM C. MENNINGER, M. D.,

Topeka, Kansas.

The treatment of agioneurotic edema depends to considerable extent upon the conception of its cause. Within the last 5 years, views regarding the cause of this condition have changed to a very large extent. Previous to that time, it was generally considered a disorder of the central nervous system and classified as a neurologic affection. While it was thought that heredity did play a rôle, it occurred chiefly in neuropathic individuals and families. It was found associated with other paroxysmal



neuroses such as migraine, urticaria, certain forms of asthma, edematous purpura and eczema (Dana<sup>1</sup>). It has been thought that exhausting occupations predisposed to it, and that slight traumatisms, fright, anxiety, grief, and sudden exposure to cold were exciting causes. Crowder and Crowder<sup>2</sup> state that sometimes "psychic influences seem to call forth an attack. The great emotions of fear and anger or prolonged and arduous mental application have been observed to precede the first attack". They also suggest the possibility of acquired protein sensitization, or anaphylaxis, as the cause. The writer observed a case in which the patient made a close mental association between onanism, which he practiced, and the attacks of edema, which curiously enough nearly always affected the genitals. Strouse<sup>3</sup> states that often the fundamental etiologic factor is clouded in mystery, "at times an associated condition such as a disturbance in the endocrine system, a marked neurotic disposition, an infection, or a metabolic error suggests possible etiology".

According to Phillips<sup>4</sup>, at present "the most prevalent opinions as to the cause are that a congenital hypersensitiveness (allergy) or else a tendency to become artificially sensitized to a foreign protein (anaphylaxis) is probably an inherited characteristic of the cytoplasm. Angioneurotic edema is generally considered as only one of its clinical demonstrations". Walker<sup>5</sup> in 1918 found 3 cases of angioneurotic edema which were apparently caused by timothy pollen, flaxseed, and ragweed pollen, respectively. McCafferty<sup>6</sup> reports a case which gave positive intradermal tests to certain food substances and negative to others. Turnbull<sup>7</sup> cites 2 cases in which he believes the patients were sensitized to chronic nasal sinus infections.

In summary, most recent work shows angioneurotic edema to be a manifestation of either congenital or acquired hypersensitiveness to foreign protein. Psychic influences play a varying rôle, which in many cases cannot be determined but should never be overlooked in a consideration of the etiology and treatment. Very probably there are precipitating factors which have no relation to the fundamental cause.

The treatment may be divided into 3 categories: (1)hygienic, (2) sensitization, and (3) drugs. In many cases, psychotherapy may also be indicated, for while psychic or emotional influences may not be the sole cause, there is no doubt that in certain cases they play a prominent part in the recurrence of attacks.

(1) Hygienic treatment: Unquestionably there are many cases that show marked improvement under a careful living régime, in which mental and physical hygiene are stressed. Regulation of sleep, eating, elimination, exercise, sex-life, and daily routine may be a large factor in securing relief. Osler<sup>8</sup> believed that the diet was not as a rule important, although many writers believe it is often a factor which should receive careful consideration. There is no set rule and, as Jelliffe and White<sup>9</sup> state, treatment regarding diet is purely empirical. One should not eat any of those things which experience has shown to be hazardous.

(2) Sensitization treatment: No detailed report could be found on desensitization in angioneurotic edema, although the work of Cook and Chandler in hypersensitiveness to foreign proteins is well known. However, it seems possible that such treatment could be effectively used.

(3) Drug treatment: Drugs are given for two purposes—symptomatically and for the possible relief of the condition. Gastro-intestinal crises have frequently been reported and may require morphin. In laryngeal edema, intubation should be promptly done. Free elimination is advisable, but often produces no effect on the edema.

A review of the drugs advocated indicates at once that none will insure relief. Calcium lactate has perhaps been most widely advocated, on the hypothetic supposition that the blood-vessels need bracing up to prevent transudation through their walls, and that the transudates are thought to be conditioned by a diminution in the calcium content of the plasma. It was first recommended by Wright<sup>10</sup>, and subsequently tried out by White<sup>11</sup>, with some degree of success. Osler<sup>8</sup>, Dana<sup>1</sup>, and Cassirer<sup>12</sup> also mention this drug as of some possible help. A more recent theory suggests that edema may be due to a sodium

retention which is freed by the calcium, a closely argued discussion of which is made by Rockwood and Barrier<sup>13</sup>, who have found calcium chlorid more effective in generalized edema than the lactate. Potassium salts (chlorid and carbonate) have been used by many for the treatment of generalized edema, the most recent report of which is made by Gibson and Larimer<sup>14</sup>, although their use in angioneurotic edema has not been recorded.

Adrenalin is rather widely advocated, and Codd<sup>15</sup> reports a case where after using 3 other drugs, adrenalin rapidly brought relief. MacGowan<sup>16</sup> recommends adrenalin solution in 10 minim doses over 3 or 4 hours. Longcope<sup>17</sup> states that a hypodermic injection of 0.5 c.c. of 1:1000 adrenalin will occasionally relieve the acute swelling. Also strychnin, ergot, and arsenic, have been suggested (Dana<sup>1</sup>, Jelliffe and White<sup>9</sup>). Pusey<sup>18</sup> has noted satisfactory results after the injection of pilocarpin. Osler<sup>8</sup> found most success with nitroglycerin or nitrate in ascending doses until the effects were felt (headache or flushing). The dose advocated is gauged for the individual and then increased until the effects are felt, then continuing for periods of 10 days, with intervals of 5 days. Duke and Sutton<sup>19</sup> found emetin hydrochlorid in  $\frac{1}{2}$  gr. doses administered hypodermically, once daily, for a period of a week or 10 days, successful in bringing relief in 2 exceedingly persistent cases of the disorder.

Horse serum is mentioned by Dana<sup>1</sup>, and Engman and McGarry<sup>20</sup> found beneficial results in 6 cases of different skin diseases by foreign protein injection. Other drugs mentioned are urotropin, quinin, mineral acids, morphin, and salicylates—all of which seem to be given with little rationale.

In summary, it may be stated that the treatment of angioneurotic edema is a problem, with no definite method available in all cases. As Strouse<sup>3</sup> states the situation, "each patient is an individual problem. It is not practical to put every such patient through the 'paces', but often a carefully taken history and physical examination will suggest a line of investigation to be followed. Focal infections should be eliminated. Glaring dietary indiscretions should be corrected, and further investigation

as suggested by the history and physical examination should then be made". The writer would like to add that sensitization tests, drug treatment, and psychotherapy should certainly be given consideration.

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## THE ISOLATION HOSPITAL.

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(Address delivered at the Second Annual Meeting  
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Belleville, N. J., on November 12, 1925.)

The great institutions of today, the universities, the schools and hospitals, the museums and endowed colleges, reflect very generally the social development of our recent culture, education and civic progress. There are some institutions, however, whose history goes back to quite remote ages of our civilization, to times of war and privation, and of plague and pestilence. In this class belong the contagious disease hospitals of this and other countries. The ancient Lazarettes of Europe, although little more than dens or stables where lepers and the sick generally were taken to die or perhaps recover under the kindly but unskilled hands of the old monks of the order of St. Lazarus, were the original forerunners from which the isolation hospitals of today were eventually developed. The conditions in these Lazarettes became so deplorable that they were hotbeds of disease and misery and the hiding places of criminals and the hopelessly crippled beggars, so that their names became a by-word for all that was filthy and revolting, a name of terror and horror among the mass of the people. The Lazzaroni of the Naples of the Middle Ages were the ragged and half starved beggars who lived around the hospital of St. Lazarus. So altogether filthy and undesirable were these people that they were required by the municipality to wear a distinctive dress so that the ordinary citizen could see and avoid them in the public concourses.

Succeeding the Lazarettes were the pest houses or plague hospitals of the fifteenth and sixteenth centuries. During these years the frequent pandemics of bubonic plague brought about the erection of pest houses in nearly every country in Europe. In these crude buildings little effort was made to provide for the medical care of patients. Food, shelter and clothing were generally the maximum of the attendance so provided. These places, however, like the Lazarettes, soon developed an unsavory reputation, where the mortality

was infinitely greater than that among the sick who were allowed to stay in their houses. Although in the eighteenth and nineteenth centuries considerable improvement took place in the treatment of isolation hospitals, they suffered in common with the general hospitals from lack of the simplest equipment to maintain cleanliness.

Isolation hospitals as we know them today are of comparatively recent origin, although St. Bartholomew's in London, founded in 1123-1133, and St. Thomas, in the same city, founded in 1547, were from time to time used for the care of contagious disease. The hospitals known to such learned professors of the healing art as Lister, Pasteur and Virchow were far from meeting the standard of today and indeed many were places of real horror, where hospital gangrene, erysipelas and septic wounds made the wards reeking dens of infection. Hospitals in those days were perhaps worse, probably no better than was represented in the living conditions of the poor with regard to the personnel who possibly manned such hospitals. A classic type of such was portrayed by Charles Dickens in his description of Mrs. Sarah Gamp, nurse and midwife in the London of 1840. He said: "She was a fat old lady, this Mrs. Gamp, with a husky voice and a moist eye which she had the remarkable power of turning up and showing the white of, having very little neck which caused her some trouble to look over herself at those to whom she talked. She wore a very rusty, black gown often the worse for snuff, and a shawl and bonnet to correspond. The face of Mrs. Gamp, the nose in particular, was somewhat red and swollen and it was difficult to be in her society without becoming conscious of the smell of spirits. Like most persons who have attained to great eminence in their profession, she took to hers very kindly, so much so, that setting aside her natural predilection as a woman she went to a lying-in or a laying-out with equal zest and relish".

We lack a description of the type of hospital attendants of those early days, but we may well assume that their attitude and demeanor were somewhat similar, except in those hospitals which were staffed by the nuns and sisters of the religious orders.

The mortality in these early hospitals was

terrible and it is stated by Tennon that in the Hôtel Dieu of Paris in the eighteenth century the mortality amounted to 22% of the patients. Overcrowding and congestion of the wards were common in nearly every hospital of that date, a condition much aggravated by defective sewerage and a total lack of modern ideas of cleanliness. Mr. James Simpson, writing in his paper on hospitalism, gave the following mortality of various hospitals in England as regards amputations: St. Bartholomew's, 36%; London Hospital, 47%; Guy's, 38%; St. George's, 38%; 9 London hospitals, 41%; Royal Infirmary, Edinburgh, 43%; and Royal Infirmary, Glasgow, 39%. A reflection upon the conditions in the hospitals at that time was well conveyed in the statistics available in the amputations in private practice which gave a rate of only 10%. The mortality in the hospitals at Scutari, over which Florence Nightingale first stirred up public resentment, showed the mortality amongst the wounded averaged between 40 and 50%. The conditions, of course, were war-time conditions, and supplies, blankets and shelter were deficient or of the crudest type.

High mortality in these hospitals was usual but was the result of overcrowding as well as of the presence of contagious diseases which were handled in the same institutions. It is on record that in the Hôtel Dieu, Paris, it was not unusual to see 2 or 3 small-pox patients or several surgical cases or at times even 4 parturient women lying in one bed. It was noted by Dr. B. W. Richardson that among the Jews there was a very unusual freedom from epidemic and other diseases and it was his opinion that the rules with regard to cleansing required by the Mosaic Law appeared to be the real cause for this immunity. Instructive instances of what made for the heavy mortality in these early hospitals are given in a report by Dr. W. Cadge, Surgeon of the Norwich Infirmary, England. In this institution patients had long been afflicted excessively with such conditions as erysipelas, pyemia, hospital gangrene, and so rampant were these diseases in the wards that it was supposed that the old building with its structural defects was responsible. Finally, plans were made to remove the old building and rebuild at the same spot. Before, however, this reconstruction

could be carried out a new hospital matron was appointed. As a result of her activities complete changes in the condition of the patients in the hospital were effected. As a result of unceasing attention to every detail of cleanliness not only of the building, wards, clothing and bedding, but of the persons concerned, the result was remarkable. There was an immediate decline in the complications of surgical and medical treatment and there was no return to such conditions as previously existed.

With the virtual cleansing of the hospitals, as a result of the knowledge gained by the work of Lister and Pasteur, these institutions soon became models of cleanliness and effective sanitation. With improvement in hospital methods there has been a corresponding change in our attitude with regard to contagion. We have seen the miasms and occult influences flee before the advance of cleanliness, pure air and sunlight. Soap and water, carbolic acid and the free winds of heaven have laid the bogey of the infected room wherein the patient sick of a contagion has been nursed. The spectre of infected air around the contagion patient has been exorcised and we regard as possible only droplet infection during respiratory diseases. The focus of infection in all cases of contagion is now recognized as existing only in the patient himself. Proper methods of personal asepsis by the attendant will minimize to a certainty any chance of infection being carried further than the direct vicinity of the patient. We have come now to recognize that if in all cases of epidemic disease continuous disinfection is carried out, by that meaning the destruction of all infected discharges from the patient during the progress of the illness, there is little chance of infection remaining about the patient and his surroundings after recovery.

With this widening of our knowledge of infection there has been a corresponding humanizing of the methods and attitudes of those in charge of isolation hospitals and their administration, a change which has nowhere been more brilliantly exemplified than in the administration of this hospital after the arrival of the present superintendent. Who does not remember the terrifying methods of arraying the timid visitor to such a hospital as this—



the long gown, the shrouded heads and above all the towelled feet. It was difficult at such times to distinguish the visitor from the patient with the ice cap and hot pack.

Health officers who have witnessed these changes have also observed a changing attitude in the public mind toward hospitals for contagion. The old horror has given way to reluctant admiration for efficient and willing service by doctors and nurses. The cheerful faces of the receiving staff have themselves carried a message of hope and friendliness to the parents, at times reluctant to give up a loved one. In the congested city street and in the dark and evil smelling tenement the hospital ambulance must at times appear as an interfering official agency and yet at the back of all this is service for humanity's sake. "In the home of the rich", says Robert Hunter, "a child lies burning up with fever. All are watchful and awake the whole night through. Doctors, nurses, servants, with a thousand appliances, make every effort to ease and comfort the little life. In the big tenement a light burns all night, and a tired workman watches every movement and listens for every breath of his hot, restless little one. At dawn he goes to his work. He kisses the feverish lips, it may be for the last time, he knows not, and all day long his heart is heavy and anxious. In the filthy hovel a drunken woman becomes sober and her flushed face white when the doctor shakes his head over the starved baby in the bundle of rags. These are but three homes. Imagine a quarter of a million!" Sickness, as Emerson says, "eats up all the life and youth it can lay hold of", comes with its message of pain and hardship to every home, and for every one visit to the mansion it comes twice to the tenement and thrice to the hovel". To the overworked mother of a large family, to the parents who have to toil early and late to make a living, when contagion strikes the family, the clanging bell of the hospital ambulance cannot but spell both relief and hope when once the bonds of affection can be reconciled to a temporary separation. "By their works shall ye know them", and it is pleasant to be able to say here that at no time in the past has it been so easy to convince parents in this country that the isolation hospital stands for kind and humane treatment for the

little patients and for efficient and up-to-date methods of treating the disease itself. The care taken in remedying the most obvious defects of patients before discharge has been a thoroughly appreciated service to the cities from which the patients come, and the follow-up work of the hospital nurses is an excellent feature of social contact which will do much to impress upon parents the necessity of medical care and after-treatment in children who have suffered from the crippling attack of one of the major infections.

The service extended by the Essex County Isolation Hospital to the county is truly a valuable social activity and the health officers are grateful for the whole-hearted coöperation of the superintendent and his staff.

#### *Requirements of a Modern Isolation Hospital.*

How does the Isolation Hospital meet the ideas of the Health Officer, suppose he were asked to score such an institution. His card would probably seek the following information:

1. Is the isolation hospital located conveniently to large centers of population?
2. Has it sufficient accommodations for all cases of infectious disease liable to demand its service?
3. Are all cases held during the quarantine period and not discharged till free from all possible contagion?
4. Has it an up-to-date and efficient staff and equipment for all needs?
5. Has the superintendent freedom of action to institute suitable systems?
6. Is there a representative consulting staff for emergency operations?
7. Are defects in patients taken care of during stay in hospital?
8. Is there a good follow-up nursing system to the patients' homes?
9. Are cross infections low in the average?
10. Is there an efficient ambulance service to reach all communities?
11. Are the laboratory facilities sufficient for all diagnostic and clinical purposes?
12. Is there ample and sufficient interne and nursing services?

Were the Essex County Isolation Hospital being surveyed, to all of these I think our health officer could give an affirmative mark

but if he came forth from Essex County he would be like *Oliver Twist*, "always asking for more", and in this case it would be for beds and more beds. May it be more than a pious hope that more accommodation will be provided in the near future so that the hospital can throw its doors open to every kind of contagion requiring skilled institutional care.

As "Health Men", we can say that not only are there sufficient beds for scarlet fever, diphtheria, poliomyelitis, meningitis and small-pox in the county, but that all the others including measles, whooping cough, typhoid fever and venereal diseases will be similarly taken care of. We can, I think, echo the spiritual appeal so ably expressed by Dickens, "that even poor laws may have mercy on the weak, the aged, and unfortunate; that schools on the broad principles of Christianity are the best adornment for the length and breadth of this civilized land, that prison doors should be barred on the outside no less heavily and carefully than they are barred from within, that the universal diffusion of common means of decency and health is as much the right of the poorest of the poor as it is indispensable to the safety of the rich and the state".

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## PSYCHOLOGIC EXAMINING AS APPLIED TO THE FEEBLEMINDED.

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The recognition accorded mental testing at the present day is a tribute to the years of labor which have been necessary to produce this result. Even a brief review of those beginnings would require more time than we can spend today. Before demonstrating the intelligence tests, however, I want to mention a few steps that led up to modern thought and accomplishment in this field.

Ancient history furnishes us little information regarding the mental defective. In early Greece and Rome undesirable

children were left to die from exposure. Only those were abandoned whose physical defects were obvious. The great mass of feeble-minded, sound in body, escaped. In the Medieval Period the influence of Christianity brought about a decided change of attitude toward these unfortunates. They were shown pity and sympathy, and those who were unsound in mind or body were cared for in asylums supported by the Church.

The Renaissance is sometimes called the period of "whips and chains". Protestantism laid stress on the individual and his own responsibility for his deeds and misdeeds, and so the insane were often cast into prisons or dungeons where they were expected to reform.

During the industrial revolution of the eighteenth century child labor was much in demand and we are told of an interesting custom which existed in England at that time. Pauper children were bound out to mill owners, and we find a record which says that "the parish authorities, in order to get rid of imbeciles, often bargained that the mill owners take 1 idiot with every 20 children. What became of the idiots is not known but in most cases they did not last long and mysteriously disappeared."

The growth of modern thought was slow and it was some time before the interest accorded the insane and feeble-minded became really scientific in nature. In 1797 an idiot boy was found in the woods of Aveyron in France. He is known as the Savage of Aveyron, for he was not at that time thought to be feeble-minded, but only backward, because deprived of the advantages of civilization. He was taken to Paris and there Itard became interested in him. At that time Itard was connected with the National Institution for the Deaf and Dumb, and was studying in the hopes of finding some cure for deaf-mutism. Itard believed that Victor, as he named the boy, could be restored to normality and worked for years with this idea in view. When he found that Victor's mentality and mutism were incurable he threw up his work in despair, failing to realize that he had rendered this



boy less burdensome to society. This was the first scientific attempt to educate a feeble-minded child.

Itard's successor was Seguin, who began the training of a few feeble-minded children in 1837. In 1848 he came to this country, where he remained until his death. He was instrumental in establishing schools for the feeble-minded and his contributions toward their training are notable. The form board used in this training we shall mention later.

So far, we have spoken only of the treatment and education of defectives. Itard's attempts to educate Victor show that a profound scientific interest in mental defect already existed. Attempts to measure this defect had been made, but without satisfactory results. One of the earliest efforts to account for mental traits is found in phrenology in the eighteenth century. This failed because it rested on an unsatisfactory method of proof. It has been found that the shape and contour of the skull have very little to do with the brain. The bumps noted by the phrenologist are simply bone thicknesses. Physiognomy was studied as early as 1772. Of its present day devotees the best known is Dr. Blackford, of New York, who has become famous for her analyses of character by means of her observation of the features of the individual. While character and intellect may express themselves in many ways, there is no evidence that physiognomy is scientific. The weight of the brain has been found to bear some relation to intelligence but this measure is not specific enough for a satisfactory diagnosis of individual differences.

The first measures attempted by psychologists were in the field of the sensations. The sensitivity of the skin was tested and a variation in different persons found, but this variation bore no relation to intelligence. The time between a stimulus and the response to that stimulus was next tested, then the span of attention, memory, and association. Each failed in itself because of the inability of investigators to see that a number of factors enter into intelligence. There is no one measuring rod, but several. As Porteus has said, "There is no master key to the mind, no simple mental

activity which, if it could be measured, would give us a reliable index to the intelligence as a whole. Intelligence testing must be concerned with a wide range of abilities.

We shall not dwell at length on the work of the various psychologists who were pioneers in the modern movement of mental testing. To the German school we are indebted for their emphasis on the experimental method and their interest in individual differences. In the French school one name stands out above all others and to his work I would call your attention today because my first demonstration will be a demonstration of his test, which, after all, is the test that leads others as a satisfactory measure of intelligence at the present time. Binet was not a psychologist at first. He studied law, then medicine, and finally became interested in experimental psychology. It will be of interest to remember that Binet was a man of many talents. His father was a physician and his mother an artist. It is said that he could have been distinguished in any one of several lines but he chose psychology. In most of his work he collaborated with some one of his pupils. Although his contribution was far greater than that of his collaborator he was most generous in his attitude, exacting little credit for himself. In fact, he seemed to forget himself. He disliked to appear in public and it is said he could never be persuaded to attend a convention of psychologists.

In his work he was original, unprejudiced, frank, open-minded and always keen for the discovery of new facts. In October, 1904, a commission was appointed for the purpose of organizing special classes in the public schools in Paris. Nothing was said as to the method of selecting children for these classes. This was natural since no one knew exactly how it could be done. Binet's election as a member of this Commission was fortunate, since Binet had been experimenting in the public schools and knew more than anyone else concerning the psychology of the normal child. He had also published a volume on the subject as the result of studies and observations of his two daughters. In his work with public school

children he had used head measurements, height, weight, tests of memory, sense perception, attention, etc., with the purpose of finding some indications for measuring intelligence. In selecting children for the special classes he realized that his problems were great. He was convinced, as he said, that "it can never be a mark of distinction to have passed through a special class". He demanded first of all that we "come to an understanding of what is meant by the word 'intelligence'". "It seems to us", says Binet, "that in intelligence there is a fundamental faculty, the alteration or the lack of which is of the utmost importance for practical life. This faculty is judgment, otherwise called good sense, practical sense, initiative, the faculty of adapting one's self to circumstances". And later—"As a result of all this investigation, in the scale which we present we accord the first place to judgment; that which is of importance to us is not certain errors which the subject commits, but absurd errors, which prove that he lacks judgment".

It is well for us to remember that the evolution of the mental test at the hands of Binet was a long process. We are sometimes wont to forget the slow steps by which it grew. His attempts to find a measure of intelligence by means of head measurements, etc., show his early adherence to contemporary thought. What he was able to achieve was secured through slow, painstaking effort. Writing of Binet's work, Goddard says, "With the advent of experimental methods in psychology, the measuring of intelligence became a possibility, but the possibility did not become a reality for many years, principally because the psychological experiments were carried on with adults, where the problems of intelligence were enormously complicated. It was the genius of Alfred Binet that conceived the idea of measuring the intelligence of children during those years when the mental processes are comparatively simple and easily determined."

In making their scale Binet and Simon were indebted to Blin, who formulated a rough scale in 1902. Blin was criticized for his random selection of tests and for his

subjective method of scoring. In stating the requirements for a suitable test, Binet says that it should be "a short, direct question of everyday life, gradually increasing in difficulty as the child increases in age." Let us take, for example, the drawing of the square: experiment showed Binet that this ability was absent at the age of 2, slight at 3, better at 4, and perfect at 5. He therefore assigned this test to year V. In the Terman revision this test appears in year IV. As another example let us consider the immediate memory for words containing an idea. In year III, test 5, we find a short sentence; in year IV, alternate, 5 more syllables are added; year VI, test 5, contains still longer sentences, and year X the longest of all. The memory for digits (containing of course no idea) makes a similar series of increasing difficulty. The picture test appears first in year III. The child of that age is able to name several objects. At the age of VII his response is in terms of action; he will note what is being done. At the age of XII he will interpret, that is, give reasons for or explain the action which he sees. The placing of these tests at these particular levels only serves to show what careful study was given to the selection and placing of every test used in the scale. With his pupil, Simon, to record the responses of the child he worked with the normal children in the public schools of Paris, constantly rejecting old tests and adopting new ones as he discovered their fitness or unfitness for his scale. In standardizing his scale Binet used the children of the middle class in Paris. He took only those who were following the right grade for their years and who were neither especially brilliant nor especially dull.

Binet's first scale appeared in 1905 and consisted of a group of tests of increasing difficulty but not grouped according to mental age. He revised this scale in 1908 and again in 1911. In the 1908 scale the idea of mental age was first suggested. It was Goddard who first introduced the Binet tests in America. In 1906 he had been appointed as Director of Psychologic Research at the Training School in Vineland. Of the 1908 revision he wrote thus: "When I read



Binet's 'Measuring Scale' I rejected it as too formal and exact. I thought 'mind' could not be measured in that way. A second thought showed me that my impression or feeling was of no value compared to the serious declaration of a man like Binet. I accordingly set about trying out the scale on our children. The more I used it the more amazed I was at its accuracy".

In 1908 Goddard began to use the scale in Vineland. He doubted whether all the tests were rightly placed for American children, so he took the next logical step in his standardization of the scale on 2000 school children. This standardization was published in 1910 and was based on Binet's 1908 scale. In 1911 he published a revised scale, to which the name "Goddard Revision" has been given.

Another worker with the Binet scale was Kuhlmann, who in 1911 published a revision of the 1908 scale. Goddard and Kuhlmann made the test known to clinical psychologists, but it remained for Terman to make it known to every school system in the country. His revision, called the Stanford Revision, was completed in 1915. It has become virtually the standard form of the Binet test used in this country. One important contribution made by Terman is the adoption of the Intelligence Quotient suggested by Stern. This Intelligence Quotient expresses the relation between mental age and physical age, and is obtained by dividing the former by the latter. Thus, if a person has a mental age of four years and a physical age of eight years, he will have an IQ—Intelligence Quotient—of  $4/8$  or 50% of normal intelligence, and will be classified as a moron.

For quick reference I have placed on the chart the classification of the feeble-minded by Mental Age and by IQ's. When a subject has reached maturity we can classify him by mental age alone. Younger subjects must be classified by the IQ. This classification follows that suggested by Dr. Francis N. Maxfield. In computing the IQ for subjects over 13.5 years of age we divide the mental age by 13.5—as 13.5 represents the line of demarkation between normality and subnormality. Terman consid-

ered 16 normal, but our recent experience in examining army recruits showed us that 16 was too high.

Right here I want to remind you that the feeble-minded child who has a test score of VIII has not the mind of a normal child of 8 years. Though he has accumulated a score mathematically equivalent to the score of a normal 8 year old, we should soon see, by analysis of his credits gained, a difference in his mental status. He may be able to do some things that a normal child of 9, 10 or 11 can do and yet fail to accomplish some of the tasks which are easily possible to a normal child of 6 or 7. As someone has aptly put it, the feeble-minded child with a mental age of 8 resembles a normal child of 8 as a "caricature resembles the original"—"as much", Binet says, "as an infirm subject can a healthy one, as much as an ungraceful and bizarre creature can resemble one that is all charm and grace".

In examining children of the lower mental levels we use the Kuhlmann Revision and the Terman Revision for the mental levels of three and above, for the reason that Terman completed a standardization of only those tests of three and over, while Kuhlmann made a thorough study of children under three years. Some tests for these lower levels were proposed by Binet in the 1905 scale, but they were few in number and unstandardized.

Soon after the introduction of the Binet test into this country it began to be criticized. It was thought to require too high a degree of language ability, to favor the glib tongued, and to be of decided advantage to the foreign born or illiterate child. This criticism has continued to some extent and has led to the introduction of the form board and other performance tests which are used as supplementary tests in psychologic examining. As we have seen, Seguin devised a form board for the training of feeble-minded children. This was suggested by a simple form board used by Itard. We are told that in training the Savage of Aveyron to recognize colors and forms, "Itard obtained a board 2 ft. square and pasted upon it 3 pieces of paper of very distinct outline and very decided colors—a red cir-

cle, a black square, and a blue triangle. He then also cut 3 pieces of pasteboard corresponding in size, shape and color to the figures on the board. The 3 pasteboard pieces were then hung over the paper figures by nails, through holes in their centers, and were left there for some days. When at last they were taken down and given to Victor he was able to replace them correctly".

The form board devised and used by Seguin was similar to the Goddard Form Board. Where the Goddard Form Board has a star the Seguin Form Board had a hexagon, and in place of the cross there was an octagon. Goddard tells us that the similarity of these forms to the circle made this form board too difficult for defective children. Furthermore, it was difficult to make a board so that the octagon block would not fit the hexagon hole and vice versa. Seguin used his form board for training; Norsworthy used it as a test; Goddard's Form Board is used as a test only.

In characterizing the feeble-minded, Binet distinguishes one group as "ill balanced". It is this mental instability which the Binet tests fail to point out. The feeble-mindedness of some individuals expresses itself in terms of intellectual inferiority. In others we see a lack of those capacities necessary to social success. Foresight, prudence, and ability to profit by experience are wanting. If these lacks are great enough to render the individual socially insufficient, the weakness is usually accompanied by weak inhibitory powers which can be demonstrated by tests. To measure this lack Dr. Porteus devised a set of maze tests. The value of these tests is from a negative standpoint. Success does not necessarily show good social adjustment. But failure in a simple situation is of enough weight to lead to the conclusion that the individual cannot succeed in a more complicated situation. These tests were standardized first in 1916 by their application to 1000 children and in 1918 by application to 1255 children. They present to the child a new situation, but one analogous to a problem which he many meet any day. He has to plan his course, using

foresight and prudence. If he fails he is allowed another trial—given a chance to profit by his mistakes. Not only by the resulting score but by the method of accomplishing his tasks are we able to judge his abilities. He may look ahead, planning carefully as he proceeds. He may work impulsively, rushing ahead until he runs into a blockade and upon being allowed a second trial repeat his errors.

The use of these and other supplementary tests represents, as we have said before, an attempt to test abilities not measurable by the Binet examination alone — abilities which are, nevertheless, essential to the success of the individual who must, as Porteus has pointed out, "attain to self-management and self-support to the degree of social sufficiency".

That we are still in need of new tests and new measurements we are all aware but, as Yerkes has so aptly put it, "We should be sadly lacking faith, optimism, and the spirit of prophecy, if we refuse to maintain the probability that more and more aspects of man will become measurable, and more and more modes of response predictable, and more and more social values appraisable."

(The presentation of this paper was followed by an exhibition of types. Each was described briefly in terms of mental age, physical abilities and industrial abilities. One each of the following were shown: Idiot—low, middle, high; imbecile—low, middle, high.

This was followed by an examination of an imbecile, using the Binet scale, the score in each test being announced and the resulting mental age recorded. A girl of moron mentality was tested by the Witmer Form Board. It was announced that members of the audience might, at the close of the meeting, examine other tests which are being used in routine psychologic examinations in this state.)

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# JOURNAL OF THE MEDICAL SOCIETY OF NEW JERSEY

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Each member of the State Society is entitled to receive a copy of the JOURNAL every month. Any member failing to receive the paper will confer a favor by notifying the Chairman of the Publication Committee of the fact.

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## ATTENTION.

Just as we were going to press, the following communication was received from Dr. J. Bennett Morrison, Recording Secretary of the State Medical Society:

"While I am able to report favorably on the number of paid-up members, the average being equal to that of last year at this date, there is still a large *delinquency list*. Members who have not been reported to me by February fifth as having paid their dues will lose their membership in county and state societies and in the American Medical Association; furthermore, their Group Insurance policies are thereby invalidated."

### *Are You One of These Delinquents?*

If you are, it would be wise to attend to this matter immediately.

## ARE YOU PROVIDING FOR THE FUTURE?

For our leading original article this month we have chosen to present a nonmedical subject, and have given the place of honor to a business topic that should be of interest to every member of the Society—to the beginner in professional life as well as to the worker who has reached or passed middle age. In one of our State Journals, we recently saw the question—"Why is it that the average doctor seems to be ignorant of the fact that the practice of medicine is a business as well as a profession and that due attention should be given to the matter of securing just dues and of providing a competence for his family?" While we cannot satisfactorily answer that query, we must admit that it seems to state a general belief that physicians, as a

class, are negligent of their opportunities and of their duties to provide for the future material welfare of themselves and their families. We are by no means convinced that "the doctor is a poor business man", as is so frequently stated by outsiders and so generally accepted by members of the profession. Indeed, we have occasionally combatted that aspersion with the statement that the average physician is an exceptionally good business man, for surely no other group of citizens could manage to live as well and maintain as good standing in the community on the average annual income of the physician. We even doubt whether medical men are such dupes in regard to investments as they are popularly supposed to be. It may be true that they invest in wild-cat schemes and buy gold bricks now and then, but did you ever note the amount of such stock that appears in "estates" of the Kings of Wall Street when they die and their investments are disclosed? Some of the greatest of our "Big Business" men have had coffers full of worthless paper.

We are inclined to the belief that such negligence of personal business protection and of forethought for the morrow as does exist grows out of the very nature of the physician's daily work. He is constantly engaged in saving life for the day, in giving of his time and talent for the solution of immediate problems, and has scant opportunity to think of himself or to plan for the future of his family. Perhaps to too great an extent the philosophy of "sufficient unto the day are the evils thereof" is forced upon him and tends to dominate his own life.

However, the situation is bad enough to require some consideration, and especially is worthy of thoughtful planning on the part of the physician still young enough or grown old enough to take thought for the future. Hence we believe this article on Taxation, including reference to Life Insurance, deals with a timely topic and presents it in an attractive manner.

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#### SOME SPECIAL POINTS OF INTEREST IN THIS ISSUE.

In the Report of the Executive Secretary, covering the last few months, members will find an accounting of the various activities of this office and we dare to hope that the efforts recounted will meet with approval.

One of the subjects touched upon in that report is Periodic Health Examinations, and we are daily finding an increasing interest in that matter on the part of the intelligent laymen. Dr. O'Crowley, in his Presidential Address to the Essex County Society, offers a proposition that might well be taken into consideration by every county society in the state, and might in addition merit the attention of the State Society. He says: "I would suggest that a special meeting of this society be called to demonstrate to members the practical application of periodic physical examinations, such as were carried out by the Kings County Medical Society, of Brooklyn, N. Y., upon more than 90 of its members." There is sound reasoning in this suggestion, for, aside from the knowledge to be gained from witnessing the application of a thorough health examination, the experience of being personally properly examined will so impress the technic on one's mind that it will not easily be forgotten.

The chapter on "Medical Economics" this month, contributed by one of your most progressive and most thoughtful members, has also a bearing upon this question.

Dr. Bradshaw's report of a visit to Cushing's Clinic, Dr. Costill's special message from the Health Department, and the historic review of the Warren County Society's Centenary, all constitute interesting reading. In fact, we think every member may find some profitable reading in this number of the Journal.

#### AMERICAN MEDICAL ASSOCIATION.

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Annual Convention at Dallas, Texas,  
April 19-23, 1926.

The Special Committee of Arrangements for the next annual meeting of the National Organization, of which committee Dr. Nathan B. Van Etten, President of the New York State Medical Society, is Chairman, and our State Society President, Dr. Lucius F. Donohoe, is an active member, has just issued a booklet describing the plans of travel available to those who will join in the proposed visit to Dallas. Through the coöperation of Lifsey Tours, 527 Fifth Avenue, New York City, (J. S. McAndrew, Tour Director), three very attractive itineraries have been planned, and it is hoped that a sufficient number of members will take advantage of these opportunities to organize congenial parties or groups to justify the committee in asking for special Pullman cars from Pittsburgh for the accommodation of members collecting at that point from New York, Pennsylvania and New Jersey.

The first plan offered contemplates a 16 day Panama Canal Zone Tour, leaving Dallas April 23, at the close of the convention, for New Orleans, whence a boat of the Great White Fleet will proceed by way of Havana, Cuba, for a round trip to the Canal, returning passengers through New Orleans back to New York and points in this vicinity by rail. The inclusive cost of such trip will be about \$450. The second plan presents the opportunity to visit Mexico, a special train leaving Dallas April 23 for the trip to Mexico City and returning passengers to New York by May 6; the total cost being \$480. Thirdly, the proximity of Dallas to California naturally suggests a visit to that state and an interesting itinerary has been worked out which will enable one to visit most of the places of particular interest as far north as San Francisco; the inclusive cost being about \$500.

Those who contemplate attending the Dallas meeting should consider the matter of travel and reservations immediately in order to secure proper care, and they may obtain full particulars by addressing Mr. McAndrew, as indicated above.



## Medical Economics

### ANOTHER OPENING FOR THE CHARLATAN.

Some fifteen odd years ago several far-seeing men started the Life Extension Institute in New York City. This was one of the earliest, and has remained one of the most important units in a movement which, growing slowly at first, has taken deeper root with the passage of time, and today as a movement is nationwide. They who started it were reputable medical men of vision and ability, who believed that the best conservation of the public health lay in inducing the public to submit to medical examination while apparently in good health and before they were aware that disorder might be brewing; and then to be checked up from year to year. Thus many ailments might be recognized in the so-called preclinical stage, and their development arrested. The movement has spread; other similar organizations have sprung up; a number of insurance companies now offer their policyholders this type of service; and a few—all too few—of the medical profession have adopted the plan for such of their patients as desire it. Public health workers are emphasizing the need for periodic health examinations, and the public has awakened to considerable interest in the matter.

Nevertheless, medical men at large not only take little or no interest but either avoid the issue entirely or make such poor examinations that even the layman is out of patience. There is far too much complaint on the part of the public that such examinations either cannot be had at all from the family doctor, or are very unsatisfactory.

Two facts then appear: first, that a growing demand on the part of the public exists for health examinations; and, second, that the medical profession so far has signally failed to meet the occasion. This situation creates another opportunity for the charlatan.

Is history about to repeat itself? To this day opinion is fairly divided as to whether Hahnemann was a charlatan or a benefactor of mankind. Truth, as often, perhaps lies somewhere between the two extremes of opin-

ion. At any rate the foundation of his cult antedated by only a few years, if it was not the actual compelling force for the more rational study and application of materia medica which marked the last half of the Nineteenth Century. It may well be that charlatans have their place in the Scheme of Things. Witness P. T. Barnum, the greatest of them all, who frankly confessed his creed—"The public wants to be fooled".

Whatever one thinks of his fame, it is clear that the name of Hahnemann has lived after him. So has Mary Baker G. Eddy's, who was the next to begin a great commercial cult based on medical shortcomings. Then in the full tide of the success of the Eddy mysticism the osteopath floated his venture; and but a scant quarter century has passed and the name of Still is writ in the halls of public fame, and shortly no man will be able to say whether Still was a charlatan or a promoter of the public weal. The chiropractor is attempting to steal his thunder: both are apparently here to stay, reminding us as a profession that we have our vulnerable spots, and have left undone those things we ought to have done.

Nevertheless, uninstructed by history—and largely contemporary history at that—we now hold wide the door for another Still, or another Eddy, to step in and take up work we are unwilling to do, accommodating the public by offering some sort of rubbish under the guise of health examinations. Truly, it is a remarkable situation! That this door is open, and that already a foot is thrust within, will be patent to any who sit in the subways in New York City and scan the advertising cards. These bid the reader to be health examined, and tell him where it may be done. Their authenticity is vouched for by the doctor's name on the card—"So-and-so, M.D., 30 Years Experience".

Parenthetically, it may be asked—Just why is "Experience" in pseudo-medical advertisement always placed at 30 years? Has 30 some cabalistic significance, as with seven, nine and three? No special incident rises in memory unless there be some analogy in Judas' betrayal of his Lord for 30 pieces of silver. But this is matter for the anthropologists.

Reasons for this state of desuetude have been discussed at many meetings and by numerous leaders of the profession. The general practitioner has been variously blamed for indifference, lack of knowledge, lack of proper facilities, lack of training, lack of ability; for lack of so many things in fact, that the composite of them true, he would have nothing left but a heap of ashes.

Charges of ignorance and incapacity cannot well be sustained against the average practitioner. Ability he has and knowledge, such as a man of usual or more than usual intelligence may acquire after long years of probationary study, and then longer years of soul-trying experience. Training is another matter and some analysis of this factor as it is offered by the leading schools must be attempted. The thing demanded is men who are capable and willing to make a careful complete physical examination of the apparently healthy: who will search for small defects, the possible forerunners of future degeneration; and who will instruct the patient how to keep fit. Note the requirement—"capable and willing." How do medical school curricula meet this demand? To develop capability the college does probably as much as can be done in the 4 or 5 years at its disposal. To develop willingness for and an understanding interest in this type of work it does nothing. Therein lies at least one crux of the situation. So far as may be humanly possible the student is afforded the opportunity to develop his capability for physical diagnosis. He receives instruction in the examination of the various regions from the best men in each department the schools can secure. These teachers are highly trained, each in his special field, be it examination of chest, eye, abdominal organs or what not, and should and do impart their ideas.

But where is this whole, so well worked out in its details, synchronized? Who teaches the student the vast importance of a systematic general examination of every patient he lays hands on, whether the chief complaint be of head, foot, or midriff? Consider the clinical material which is demonstrated to him in the hospitals and dispensaries—invariably the acutely ill, or those enough advanced in chronic illness to exhibit a definite symptom complex. Where does he receive instruction in the importance of the study of early symptoms? Who develops his interest in small lesions, hardly to be recognized, but possible precursors of serious disability? The young doctor leaves his hospital service well equipped to make a varied assortment of special examinations, and capable of diagnosing many ailments

in their recognizable stages. He begins practice, and shortly is busy. Time presses, and the tendency grows to examine the area of which complaint is made and pass over the rest as immaterial to the point at issue. There creeps into his attitude impatience with trivial complaints, and the resort to hysteria and neurasthenia as terms of diagnosis becomes all too easy. The end result is a physician who has no time to fuss over the well persons, nor interest in the one whose symptoms are apparently slight. The medical school is largely to blame; to a great extent it has made him what he is.

Fifty years ago good general practitioners were graduated because the teaching was in the hands of men themselves skilled in general practice. Today the teaching ranks are filled by the laboratory man and the highly trained specialist, with the result that the product of the mill is better material for recruiting the ranks of the special workers in medicine than the ranks of general practice. More useful to the public, it would seem, were there a better balance; for the majority of graduates must go into general practice, and some idea of its problems and interests should be presented to the student. Were this done in an attractive manner and with the same thoroughness with which much of the other instruction is given, the public would suffer less from the young practitioner's inexperience and total unpreparedness for the economic problems of his career, and there might be fewer quacks and less charlatanism.

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## Esthetics

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It is doubtful whether there has ever been a more remarkable development of any single project than has taken place in relation to radio broadcasting service during the past two or three years. When one considers how very recent is the discovery of practical use of wireless telegraphy and of the aerial dissemination and reception of messages, the accomplishment of present day conditions is amazing. Especially has this development been noteworthy in the United States, and particularly marvelous in the area of which we happen to form a part. The principle broadcasting studios of the nation are located in or within a short radius of New York, and within the territory embraced by New York, New Jersey and Pennsylvania are many thousands of receiving sets. The ease with which the humblest home may today pick out of the air



the important news of the day, lectures of an instructive character, or entertainment of varied type, almost surpasses comprehension.

It is to but one feature of this great innovation, however, that we would here call attention—the possibility of the tired, overworked medical practitioner availing himself of an occasional hour with the great musicians. We are quite aware of the prevalence on the air of “jazz”, and cognizant of the complaints—steadily becoming more numerous and more persistent—that too large a proportion of the evening programs is devoted to music of that nature, but, we wonder if the complainants have observed what a change is taking place and how much really excellent, classic music is now being presented for our delectation. To those who love good music, and who have far too little opportunity to indulge their taste by attendance upon the opera or the symphony concerts, even when such musical centers are close at hand, we would offer the suggestion that the advance radio programs be scanned for the important offerings announced. And, one can scarcely conceive a greater blessing than is now made available to those who live at a distance from the larger cities and who, though hungering for those rich soul thrills that come only through the medium of inspiring music, have never, or but rarely, found it possible, to satisfy their longings by actual contact with musical organizations. Today, no matter where we may be domiciled in this state of New Jersey, and it might almost be said no matter how humble the home or our resources, we have but to “listen in”, for some of the best of the world’s music is being “put on the air” and at stated times is ours for the taking.

For instance, there was recently a series of recitals from Steinway Hall, in which such important musicians participated as: Josef Hofman, Guy Maier and Lee Patterson, pianists; Walter Damrosch and William Mengelberg, conductors; and Paul Kochanski, violinist. These artists were heard in concerts of an hour and a half duration, broadcast from WJZ, WRC, WGY and WBZ. Also of interest have been the Lewisohn Free Chamber Music concerts issued from Hunter College, New York, every Wednesday night. In this series the first part of the program was devoted to the classical school of writers, presented in chronologic order, and the second part was reserved for modern works. These are but a few of the musical treats given freely to us in the past few weeks.

As a sample of what to expect in the near future, we have only to quote from today’s New York Times (Sunday, January 24) a

few of the outstanding features of the program for the coming week: Sunday evening, 9:15 to 10:15; New York Symphony Orchestra, Walter Damrosch conducting—WEAF and 14 other stations. Monday, 9 p. m., The Hadley Philharmonic Orchestra — WEAF and 14 stations; at 10 p. m. the opera, “Martha”—WEAF and 5 stations. Tuesday, 9 p. m., Old-time songs, WEAF. Wednesday, 8:30 p. m., New York String Trio, WJZ, and 9:50 p. m., the Lenox String Quartet. Friday, 9 to 10 p. m., Giuseppe de Luca, baritone; Dusolina Gianini, soprano; Renee Chemet, violin; Victor Salon Orchestra—WJZ and 4 stations. Saturday, 8:25 p. m., New York Philharmonic Society Student Concert—WJZ and 2 stations.

In addition to such weekly programs announced in advance, the daily local papers publish the schedules of events from all over the country and note the changes necessitated by unforeseen complications. The last week of January is being devoted to international radio tests, efforts to determine what European stations may be readily heard in America and vice versa, and it now seems quite certain that before long we shall be able to listen in, while enjoying the comforts of our own fireside, to the musicales of the great art centers abroad. Here indeed are the prospects of great things coming to us. Let us show sufficient interest in the progress of events to partake of this marvelous treat, to relax from the strain and labor of the day, and to fill our souls with the spiritual rejuvenation of good music.

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## Medical Ethics

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We devoted this space last month to consideration of the first section in our Principles of Medical Ethics—that paragraph, which deals with “The Physician’s responsibility”—endeavoring to illustrate its applicability to one of the important problems of the present moment, and to suggest that the commencement of a new year afforded an appropriate opportunity to rededicate ourselves to that principle as our chief guide for the future. Embraced within the same paragraph referred to, one finds the following sentence relating to the practice of medicine as a profession: “In choosing this profession an individual assumes an obligation to conduct himself in accord with its ideals”. Now the “ideals” of this profession constitute a topic concerning which much might be written—about which much has indeed been written by many able writers—and

while cogitating upon the question of how best to approach that aspect of the subject we happened upon an editorial in the January issue of the Journal of the Indiana State Medical Association which seemed well worth passing on to all of our readers, because it sets forth these ideals in a somewhat unique form.

Referring to the many distinguished medical men that Indiana has contributed to the professional ranks, the Editor says: "We could give the names of numerous men who have both graced and honored the medical profession of our state but for our purpose at this particular time we choose to recall to memory Dr. Frank B. Wynn, whose professional attainments were recognized far beyond the confines of his native state, and whose lovable disposition and punctiliously ethical conduct endeared him to all with whom he came in contact. Among his many writings nothing created a greater impression than his composition entitled, "The Ten Commandments of Medical Ethics", which was printed and beautifully embellished in colors, at the suggestion of friends, for framing and use as a decorative piece on the walls of the offices of medical men. We regret to admit that in this age, when so many medical men think only of commercialism and the intrinsic rewards from the practice of medicine, too few have secured a copy of Wynn's Commandments."

For the benefit of the younger generation—and the Editor might, we suspect, quite as logically have said as a reminder to many of their still active elders—Wynn's paraphrasing of the professional code and of biblical form and language is reproduced, as follows:

#### The Ten Commandments of Medical Ethics.

##### I. Reverence and Responsibility.

Remember the Creator in the days of thy professional youth. Bow reverently before the wondrous human body, sick or well, as thou wouldst before a sacred shrine, conscious of thy high duty; resolved to serve to the best of thy power, whether the patient be white or black, prince or pauper, saint or degenerate.

##### II. Historic Appreciation.

Honor thy father and thy mother. Likewise give praise to the fathers in medicine whose rich heritage of scientific and clinical truth has been handed down to thee through centuries of patient toil. Hold fast to that which is good, but let not the prejudices coming out of the past, blind thy vision to the newer truths of medical advancement.

##### III. Keeping the Faith.

Thou shalt not worship the graven images of false practice—of avarice and selfishness which eat at the very heart of medical idealism; of clever artifice or brazen quackery which knowingly deceives; of erratic isms and cults which tell but half truths, leading the ignorant and unwary astray.

##### IV. Inviolable Confidences.

Thou shalt not disclose the secrets confided to thy keeping by trusting patients, unless they be of criminal or treasonable import. Nor shalt thou abuse the intimacy granted to thee by women, which becomes a professional and moral obligation thou shouldst hold inviolate.

##### V. The Sanctity of Life.

Thou shalt not hazard life unwarrantably. Neither shalt thou shrink before the obvious perils of duty when life is at stake. The unborn shalt thou not destroy, except after due consultation it is deemed advisable for the larger saving of life. Suffer not death to come through neglect in the routine care of the sick, nor from failure in reading, study and counsel, to gain the greatest benefit for the patient.

##### VI. Professional Coöperation.

Thou shalt not bear false witness against a worthy professional brother, but seek ever to protect his reputation from calumnious attack by misinterpreting laymen. Of thy knowledge give him unstintingly, counseling and coöperating for medical progress.

##### VII. Gentlemanly Conduct.

Thou shalt not prate of cases, nor countenance unseemly boasting of thy achievements in the lay press. Always a gentleman, let thy conduct be reserved but without cowardice; courteous but without flattery; dignified but of warm heart; tender in ministration but firm in command; clean of body, speech and mind.

##### VIII. Honesty in Business.

Thou shalt not steal; neither shalt thou make extortionate charges nor deceive by the secret division of fees. Let thy service be worthy of hire for which exact fair compensation, but by open methods, with conscience void of offense toward thy fellowmen.

##### IX. Obligation to One's Own.

Take heed of the morrow for the sake of thine own flesh and blood. Therefore shalt thou keep orderly accounts, collecting from the full-handed just recompense for service rendered. To the poor and to the families of deserving colleagues thou shouldst account it a privilege to render faithful attention.

##### X. Personal and Public Service.

Remember thou art thy brother's keeper—physically in the measures advised for the prevention, alleviation or healing of disease; spiritually in the cheer thou bringest to heavy hearts and the courage thou givest to halting steps. So walking upright before man, mayest thou show thyself approved unto God. Thus journeying toward life's end, if not singing with the Psalmist, "My cup runneth over", thou wilt at least be sustained by the reflections of "A workman who needeth not be ashamed".

#### Always Thinking of Her.

Mother: "What, Bobby! You ate all that cake without thinking of your little sister?"

Bobby: "I was thinking of her all the time. I was afraid she would come before I had time to finish it."



# Special Article.

## HISTORICAL ADDRESS

read at the  
Centennial Meeting  
of the

### Warren County Medical Society

at Belvidere, N. J.,  
on November 12, 1925.

by

G. Wyckoff Cummins, Ph.D., M.D.

We are gathered here today to take a retrospective look over the first one hundred years existence of the Warren County Medical Society, an organization whose members have come into intimate contact with every person in Warren County. They have been the first to welcome every one on his arrival into this world and only too often the last to bid him farewell on his departure to another one. It has been the very great privilege of many members of this organization to come into professional contact with 4 or 5 generations of the same family, attending them through all the vicissitudes incident to human life, their friend and confident through sickness and health, often with no other thought of reward than the knowledge of work well done and fully appreciated.

No sooner had Warren County been formed than its progressive medical men began to think of forming a county medical society and procured a warrant for its organization from the Medical Society of New Jersey at Trenton on November 8, 1825.

The Warrant reads: A petition presented to the Medical Society of New Jersey by physicians of the County of Warren praying a warrant to form a district society in said county, it was ordered that Jabez Gwinnup, W. P. Clark, George Green, S. C. Cook, Stewart Kennedy, J. P. B. Sloan, Thomas P. Stewart, David P. Hunt, Gideon Leeds and David Green be authorized to constitute a district society which shall be known as the District Medical Society for the County of Warren.

Jno. W. Craig, Sec. pro tem.  
Trenton, Nov. 8, 1825.

Several, and perhaps all, of these physicians were already members of the Medical Society of New Jersey, and 2 of these, Drs. Gwinnup and Leeds, were members of the District Society for Sussex County at its formation on May 12, 1818.

Pursuant to public notice and in accordance with the above warrant, a number of physicians of the County of Warren met at the house of John P. Ribble in Mansfield, now Washington, on February 15, 1826, and organized our District Medical Society by choosing Dr. Jabez Gwinnup as President; Dr. John Ball, Vice-President; Dr. Stewart Kennedy, Secretary; and Dr. Gideon Leeds, Treasurer. Drs. George Green and John P. B. Sloan prepared a draft of the Constitution and By-Laws before the next meeting in Belvidere on April 25, 1826. This constitution and

these by-laws, twice amended, have been signed by the 115 physicians who have had the privilege of belonging to this organization.

A careful reading of the By-Laws shows that the District Society was the working unit of the State Society, in this county. Its Board of 3 Censors examined, for a fee of \$10.00, all candidates for the practice of medicine in the following branches: Materia Medica, Pharmacy, Anatomy, Physiology, Surgery, Theory and Practice of Physic, Chemistry and Midwifery.

The examination and recommendation by these censors was sufficient to secure from 2 Judges of the Supreme Court, approval and admission to practice in accordance with the first law to regulate the practice of medicine in New Jersey made on September 26, 1772. This was 6 years after organization, at New Brunswick on July 23, 1766, of the first medical society in America, called the New Jersey Medical Society.

The By-Laws adopted the fees of the State Society, which were:

Confinement .....	\$1.00
Confinement Preternatural Case, .....	3. 00
Forceps Case .....	3. 00
Gonorrhea .....	2. 50
Gall-stone .....	5. 00
Trepan .....	3. 00

It has been the very great privilege of the writer to know those who used to know the first members of this society 100 years ago, and fine men those physicians were, too! They were a little more set apart from the rest of the world than professional men now are; a little more distinguished, if you please. They wore the traditional black broadcloth suit, white cravat, ruffled shirt and silk hat which marked them out very distinctly from the people who usually wore linsey-woolsey. Until recently, physicians have always had some distinguishing mark or peculiarity.

Even in the 1880's and '90's a doctor's carriage in the city was different in design from any other vehicle on the street. I wonder if we will ever have an automobile of special design so pleasing and distinctive that every doctor will want one. I fear not. In this age I doubt if anyone could pick out the physician from a crowd of business and professional men either by his automobile or by his dress.

One hundred years ago the universal method of personal travel for men was on horseback. Although a chair or chaise might be permissible for ladies if it were available. And so we find the country doctor of 100 years ago starting on a good riding horse at an easy canter or lope or gallop to visit his patients as far as 20 or 30 miles away. Ample saddle bags contained his armamentarium. In them were found jalap, calomel, ipecac, laudanum, salts, nitre, guaiac and quantities of dried drugs, roots and herbs for making teas. A thumb lancet, a spring lancet, and a turn key for pulling teeth. Buggies did not become common until the 1850's and the saddle horse remained side by side with them even until the advent of the automobile. Bicycles offered the speediest method for doctors to reach their patients on short trips in the 1890's and even up till 1910. Since then the automobile has crowded every other form of locomotion aside and we have apparently reached the end of progress in locomotion unless we take to the air. Nineteen

hundred and twenty-five is also the Centennial of the locomotive and during the past 100 years so many other fundamental inventions and discoveries have been made that those years will be known in future ages as the Century of Invention. In fact more additions have been made to human knowledge in the past century than in the preceding 100 centuries.

It is not remarkable then that medical science should advance in a similar degree. The past century has witnessed the introduction of anesthetics, both general and local; of antiseptics, with their corollary of aseptic surgery; the discovery of germs as the cause of contagious disease, leading to the knowledge of toxins, antitoxins and vaccines; the discovery of hormones as controllers of metabolism, growth and development; the wonders of the x-ray and radium and the discovery of many new chemical compounds of specific application; and, although every advance in medical knowledge and practice has met with the opposition that comes from the inertia of preconceived erroneous opinions among laity, yet the minds of the physicians of this organization have been open enough to give every new idea a fair hearing, and it has been right here in the meetings of the Warren County Medical Society that discussions pro and con have determined our early acceptance of valuable methods of treatment. As a consequence, we feel that we have done our bit in advancing the average of human life from 40 years in 1860 to 54 years today. This has been done in spite of the opposition of those fadists, and they are numerous right here in New Jersey now, who decry vaccination, the giving of antitoxin, and the use of vaccines, and even oppose the use of any drugs at all.

The physicians who have belonged to the Warren County Medical Society since its organization number 115. Their names are as follows, with the dates of election to membership:

1826, \*Jabez Gwinnup; 1826, \*John Ball; 1826, \*Gideon Leeds; 1826, \*Hugh Hughes; 1826, \*Wm. P. Clark; 1826, \*David P. Hunt; 1826, \*Silas C. Cook; 1826, \*Stewart Kenney; 1826, \*Thos. P. Stewart; 1826, \*George Green; 1826, \*John P. B. Sloan; 1827, \*Roderick Byington; 1828, \*Jacob T. Sharp; 1829, \*James C. Fitch; 1830, \*James C. Kennedy; 1830, \*Thomas Darling; 1834, \*Hugh H. Abernathy; 1834, \*William J. Johnson; 1835, \*Henry Southard; 1837, \*William B. McCullough; 1837, \*Alex K. Gaston; 1837, \*William B. Dey; 1845, \*William Cole; 1846, \*P. F. Brakeley; 1847, \*D. C. Wilson; 1848, \*Lewis C. Cook; 1849, \*Samuel S. Clark; 1850, \*James D. DeWitt; 1851, \*Garner H. Cline; 1853, \*William Kennedy; 1853, \*John C. Johnson; 1853, \*Philip F. Hulsizer; 1853, \*John S. Cook; 1857, \*Redford Sharp; 1857, \*Edward Byington; 1862, \*Geo. D. Fitch; 1862, \*L. C. Osmun, Jr.; 1862, \*P. N. Jacobus; 1865, \*Theodore Crane; 1865, \*Henry Hulsizer; 1865, \*Luther C. Bowlby; 1865, \*Samuel S. Kennedy; 1866, \*L. S. Osmun; 1867, \*Joseph F. Sheppard; 1868, \*Geo. S. Dearborn; 1870, \*Enos T. Blackwell; 1870, \*Wm. M. Hartpence; 1870, \*Henry H. Rinehart; 1871, \*J. Marshall Paul, Jr.; 1871, \*David D. Dildine; 1871, \*John A. Raub; 1872, \*Henry S. Harris; 1873, \*Wm. H. McGee; 1874, T. T. Mutchler; 1874, \*William I. Roe; 1875, \*John H. Griffith; 1876, \*George H. Jones; 1878, \*Robert Bond, Jr.; 1878, \*Jacob I. Roe; 1878, \*Milton M. Armstrong; 1879, Isaac Barber; 1879, \*Robert A. Stewart; 1880, \*J. Wil-

liam Dalrymple; 1882, \*Alva C. Vansyckle; 1884, \*James M. Reese; 1887, H. O. Carhart; 1887, G. O. Tunison; 1888, Wm. C. Albertson; 1890, \*Robert Bond; 1890, \*William Stites; 1890, \*S. N. Rowell; 1890, William J. Burd; 1891, L. B. Hoagland; 1891, Bonn W. Hoagland; 1891, John C. Albright; 1891, G. Wyckoff Cummins; 1892, William Kline, Jr.; 1892, Chas. B. Smith; 1896, Frank W. Curtis; 1896, Louis C. Osmun; 1897, A. P. Jacoby; 1898, Fred K. W. Haggerty; 1899, Fred J. LaRiew; 1899, Chas. M. Williams; 1902, Charles H. Boyer; 1905, H. B. Bossard; 1905, Thos. S. DeDrick; 1905, Edward H. Moore; 1905, \*Frances J. Drake; 1905, Edgar N. Brasefield; 1905, Walter Storm; 1908, Floyd A. Shimer; 1911, F. S. Gordon; 1911, F. P. McKinstry; 1911, W. H. Albright; 1911, Thomas Barber; 1911, Robert H. Woodruff; 1915, F. P. Lefferts; 1915, H. R. West; 1915, Francis A. Wolf; 1915, R. W. Randall; 1916, James M. Torrence; 1919, G. G. Mills; 1919, Charles H. Lyon; 1921, A. C. Zuck; 1922, J. I. B. Vail; 1922, W. Penn Vail; 1922, R. B. Stone; 1922, G. F. West; 1923, L. H. Bloom; 1923, A. H. Bloom; 1924, J. H. Spillane; 1924, Leon W. Hackett; 1925, C. H. Cline. (\*Deceased.)

Nearly all of our members elected prior to 1922 have now served as president of this society. We have had 9 Secretaries: Stewart Kennedy, William P. Clark, William J. Johnson, James C. Fitch, Philip F. Brakeley, John C. Johnson, William J. Burd, P. J. LaRiew and Louis C. Osmun. Of these, Dr. Brakeley served for 43 years and Dr. Burd for 25 years. The following 8 physicians have served as Treasurer: Gideon Leeds, George Green, H. H. Abernathy, R. Byington, S. S. Clark, W. H. McGee and G. Wyckoff Cummins; all except the last name being now deceased.

Our county society has been thrice honored by having one of its members elected to the Presidency of the State Society: Dr. Thomas P. Stewart, in 1840; Dr. John C. Johnson, in 1867, and Dr. John C. Clark, in 1878; and, Dr. William P. Clark has served as Vice-President. Permanent Delegates to the State Society have been: Alvah C. VanSyckle, James M. Reese, J. Wyckoff Cummins, Charles B. Smith and Louis C. Osmun. Of our members, 11 (about 10%) have practiced medicine for more than 50 years: Drs. Stiles, Abernathy, Gale, Shipman, Cline, Cooper, Gwinnup, S. C. Cook, Fitch, John C. Johnson, and James DeWitt. Of our present members, Dr. Isaac Barber has been with us since 1879, or nearly half of our century's existence. Of the total number of 115 who are or have been members, only 43 are now living.

When our society was 32 years old, Dr. Fitch had this to say on the occasion of the death of Dr. William C. Clark: "It is a swift current—that stream of life on which we ride. I am now, gentlemen, one of your oldest members. Yet, of those who occupied these seats when, for the first time, I listened to the deliberations of this body, but few remain. Of the pioneers, the founders and early members, not one remains."

One hundred years ago, when our county was named, there was a great deal of thought given to the approaching semi-centennial of American Independence. Lafayette was visiting us and was present at the laying of the corner-stone of Bunker Hill Monument, so it was quite natural that we should think of the brave hero of Bunker Hill, General Warren, in choosing the name for this county. We, as medical men, can be



proud of the fact that he was also Dr. Warren, a practicing physician, and that it was he who gave to Paul Revere and Dawes the signal to spread the alarm.

The physicians of Warren County have always been of necessity resourceful men, ready to do whatever was needed in any situation. They performed amputations, operations for strangulated hernia, removal of tumors, and in fact, most operations for conditions that are now treated in the hospitals. For this purpose they purchased fine sets of instruments that any member might be privileged to use and for many years kept them in good order.

The country resident in New Jersey is more favorably situated than are most country people. A great deal that is good and desirable flows into New Jersey from the great centers of population to the east and west of us, making New Jersey in many respects the richest state in the Union. This is particularly true in a medical sense, for the great medical centers of New York and Philadelphia, than which there are none better equipped in the whole world, have been at the ready disposal of New Jersey practitioners both in equipment and personnel. This reacts on the New Jersey practitioners themselves in a very favorable way so that it is comparatively easy for them to keep at the very front of medical progress.

Through the kindness of his grand-daughter, I have here the account book of our first president when he was a physician at Belvidere, between 1797 and 1803. Since he was the only practitioner for miles around, we can get, by reading between the lines, a fairly good idea of the diseases prevalent here at that time, for he very carefully gives every prescription and the charge for each item. I also have the account books of Drs. Leeds and Fitch, of Hope, and the saddle bags of Dr. Leeds, our first Treasurer. A reading of these old records shows us that blood-letting was very common; in fact, it was considered the proper thing to let some blood every spring, with the erroneous idea that there was such a thing as bad blood and that the opening left by the spring lancet in some mysterious way let out the bad blood and left behind only the good. This idea of bad blood was connected with the idea of humors in the blood, which also should be gotten rid of, and this seemed to be proved by the amount of pus that would run out of a cut, which in those days was, of course, always an infected wound; and, where could this pus come from if it did not come out of the blood? And if it was there why not get it out? Hence the universal use of fly blisters, of mustard draughts, of the actual cautery, of setons and even of filth poultices. Of course, the greater the infection the more bad humors you got out of the blood. But, even in those days, they noticed a difference in the discharges; some they called "laudable pus" in contrast to others not so praiseworthy. I suppose that may have been a difference between staphylococcic and streptococcic infection. It is surprising now how many of these old ideas persist with the laity. In fact, credulity seems to be actually increasing in the last few years and many of the laity are so far out of touch with modern medical advance as not to be restrained by it from taking up with any absolutely unscientific fad that comes along.

We must remember that there is always a possibility of being so far advanced in medical sci-

ence as to be out of touch with our patients. We trust that the publicity given through the press by our State Society will remedy this in large part. In the old days heroic doses were the rule and purging and vomiting and sweating were considered the proper things to effect for nearly any sickness. It would seem as though both laity and profession adopted as their motto "make the patient as uncomfortable as possible and you will be doing all that can be done for him." Inoculation is frequently mentioned in the old account books and since this was done by the actual small-pox scab it means that the physician himself had either been inoculated or had suffered from small-pox. One physician of the county who had procured a small-pox scab for inoculation purposes was accused of bringing small-pox into the community for the purpose of increasing his practice.

The old records show that money was not always forthcoming and that the doctor took his pay in a quarter of veal, a bushel of wheat or corn, rye, or oats, a few pounds of flax, some watermelons and so on, and Dr. Gwinnup closes one account with '18 shillings worth of damned abuse", after vainly trying to get it settled by taking 2 young turkeys and some horse pasture. As an evidence of changed social conditions, we find some credits in some of the old records as follows: 1 pint of rum; 2 gills of whiskey; 1 mug of beer; 1 quart of Royal Cider; 1 grog; 1 gin sling; 1 gill of brandy; 1 gill of bitters. I am sorry to say that 2 physicians of those olden times lost the confidence of their patients, through over-indulgence, and had to retire from practice.

Up to the time of the Civil War every one in Warren County was more or less of a farmer no matter what other trade or profession he followed. That is, he had his own chickens, pigs, cows and horses; he laid down his own winter's meat, and filled his cellar with apples, potatoes and a barrel or two of cider. A physician's stable had in it several of the finest saddle horses that he could pick out in his wide travels, and often he was not afraid to back his finest trotter in the impromptu horse races that occurred on Saturday afternoons. Every community was largely self-contained and produced within itself everything it needed except sugar, salt, pins, needles, jewelry, and some foreign drugs. The physician was able to gather bone-set to make the famed tea for fevers and agues; calamus, gentian, and old-man-in-the-ground for tonics; rhubarb and mandrake for physic; tansy as an emmenagogue; blackberry root for diarrhea; mustard seed for plasters; slippery elm bark for a vermifuge; and a host of other garden and field herbs for every ailment they could give a name too.

Once before, in 1872, a committee was appointed to gather historical material. That was for our semi-centennial. We never held a semi-centennial but the committee kept on working for 18 years and finally published their findings in the Transactions of the Medical Society of New Jersey, for 1890. It was 104 pages in length and I am sure you will forgive the committee today for not insisting on a sketch of equal length to be read at this meeting. A part of that report reads: "It is a solid satisfaction to know that, with extremely few exceptions, the doctors who practiced in the first century—from 1760 to 1860—were men of education in all the medical

knowledge extant in their days; men of character who strongly influenced the communities they served and who took prominent parts in the moral and educational institutions of the county." \* \* \* "The reputation of a physician does not long survive his active life, the best work that he does is unseen and unsung. The highest recompense, that of the inner consciousness of doing good and meeting daily responsibilities to the utmost, and dispensing the gifts of medical experience to the sick and suffering, must serve to relieve the toil and anxiety of the daily work and constitute his best earthly reward." These are the words of our beloved Dr. John C. Johnson, who was Secretary of that committee, the other members of which were: John S. Cook, Philip F. Hulsizer, John H. Griffith and William H. McGee.

May we give just a word concerning those sturdy characters who practiced medicine here before the formation of this society. Dr. Samuel Kennedy was the first practitioner in all the territory that now forms Warren and Sussex counties. He practiced at the Old Log Gaol, now Johnsonburg, as early as 1766 and he continued in practice until his death in 1804. Dr. Robert Cummins came to America to enter the Continental Army as a surgeon, and at the close of his service settled at Mt. Bethel, or Egbert's Church, where he practiced until his death in 1806. Mrs. Margaret Warne, or Aunt Peggy, was an obstetrician who practiced her art for miles around Broadway, making her trips on horseback in all sorts of weather; Peggy Warne Chapter, D. A. R., is named after her. Other practitioners of early days were: Abel Johnson, at Johnsonburg; Henry Palmer, at Hope; Samuel Fell, of Johnsonburg; John Cooper, of Phillipsburg; James Holmes, at Asbury, and William Hampton, at Hackettstown.

Some of the physicians of Warren County have answered their country's call in every great war: Drs. Holmes and Cummins served in the Revolution; Drs. Samuel W. Fell and Reuel Hampton, in the War of 1812; Drs. L. C. Bowlby, Edwin Randall, Moore, Torrence and Hoagland in the World War.

I wish I had the time and the ability to give extended mention of at least some of the splendid men who have preceded us and who have taken the long journey, but you will find better accounts than I could write in the published biographies in the Transactions for 1890 and in the various biographic notices published in the Journal of the State Society from time to time.

#### The Winner.

The silver plated Dumb-bell  
Tied in  
Raspberry ribbon  
Goes undoubtedly  
To Henrietta  
Who thought  
That a sloe gin rickey  
Was an oriental  
Vehicle  
Drawn by  
A tired Chinese.

## Current Events.

### Report of the Executive Secretary to the Welfare Committee of the New Jersey State Medical Society, December 20, 1925.

Mr. Chairman and Gentlemen:

Since our last meeting, October 4, the Secretary's office has been even busier than usual. The plans then announced and authorized have been put into effect and have attained an unexpected degree of success.

(1) Broadcasting. Of the list of 10 radio talks outlined to you, 9 have already been delivered and the final one is scheduled for delivery on Christmas Eve; the title of that talk having been changed to read, "A Christmas Message From Your Family Doctor". These short essays have been also distributed to the newspapers of the state in mimeographed form and we have been gratified by the reception accorded them. The leading papers of the state have published these articles in full each week and we count it especially pleasing that so important an organ as the Newark Evening News has endorsed them. We have no means of determining just how effective the broadcasting has been but we know, without regard to the actual number of persons that may have "listened in", that the scheme has enabled us to get the periodic health examination matter before a very large percentage of the people in this state, through the coöperation of the radio and the newspapers. Personal friends have reported that they have been regularly listening to these talks and the broadcasting studio has indicated satisfaction with what we have done and with the results as its management hears of them; a goodly number of persons have written to ask for further information or advice, which would seem to indicate considerable interest in our program and that it is proving effective. One "radio fan" in San Diego, California, wrote to say that he had heard my second talk and, later, sent us a newspaper clipping to show that this feat had been recorded in the newspapers out there; this is interesting because he could hardly have had any previous information as to what was coming and he even got my name correctly, which is more than some people do after I have presented them a card. That the broadcasting has not been an unqualified success is evidenced by complaints to the effect that WHAR is difficult to get in some parts of New Jersey, partly because it is "drowned out" by stronger sending stations if they happen to be working at the same moment. This difficulty in hearing WHAR seems to exist mainly in the northern part of the state, yet I must record the fact that only a few days ago I received a letter from a gentleman in Newark asking me to address a joint meeting of boys' clubs, to be held in Montclair, and giving as his reason for extending the invitation the fact that he had been listening to my radio talks.

The Atlantic County Medical Society voted last winter, at the instance of Dr. W. Blair Stewart, to have a selected group of its members prepare a series of health talks, to be passed upon by a special committee and then broadcast under the auspices of the county society in such manner as to avoid any suggestion of personal advertising. I have recently conferred with Dr. Stewart, suggesting that he endeavor to have this material ready to use immediately after the first



of January, as a sort of "follow-up" to our series. Dr. Stewart has adopted the idea and is making preparations to broadcast those messages from WPG. This latter is a more powerful sending station than WHAR and it may be possible to arrange to have our next series, if continuance of this work seems to you advisable, sent from that station; though I have been informed within the last few days, that the WHAR outfit is to be strengthened also and have been urgently invited to continue to broadcast from that station because since announcement was made that this series of talks would end on December 24 there have been a number of requests for additional talks of similar character or dealing with more specific disease problems.

(2) Talks to Lay Organizations. The second education feature with which we had to deal was embodied in the letter of which I spoke to you, addressed to Rotary and Kiwanis clubs throughout the state, asking for an opportunity to address them on the subject of longer life through better health. The response to those letters has been of such nature as to require my running all over New Jersey during November and December and booking myself for similar meetings solidly for available days until the middle of January and with scattering dates running to the middle of March. My circular letter was issued on November 6, and since then I have visited and spoken at 13 such meetings: 7 Rotary clubs, at Lakewood, Westwood, Boonton, Hackensack, Lambertville, Weehawken, and Bound Brook; and 6 Kiwanis clubs, at Riverside, Burlington, Hackettstown, Cape May, Ocean City, and Toms River. The distances to be covered in keeping these engagements have been considerable and is evidenced by one experience of speaking at Hackettstown, in the northwest part of the state, on Tuesday evening and having to address another club at Cape May, on the extreme southern point, the following evening. At every such meeting I have been accorded a hearty reception, appearing as the representative of the State Medical Society, and have been given every opportunity to present the public aspect of periodic health examinations in a satisfactory manner. An interesting concomitant of addressing these social gatherings has been the unexpected amount of newspaper publicity secured; reports of most of these meetings have appeared in the local papers on the following day and the State Society has received much commendation for providing this new educational program. I have not been able to collect all these reports to show you, because the secretaries usually forget their promise to send me the paper or clipping but I am hearing of these publications from various sources and hope ultimately to secure copies for filing in our scrap book. Incidentally, I would like authorization to subscribe to a clipping bureau service.

It was contemplated, you will remember, that a similar circular letter should be sent to all of the Women's clubs in the state but I have delayed issuance of that letter because the pressure of Rotary and Kiwanis engagements made it impossible to take on anything more and I felt that it was unwise to start anything that we were not prepared to finish. Through the courtesy of Dr. Eagleton, I have secured a list of all the Women's Clubs and shall issue the proposed letter at a later date if that plan be in accord with your wishes. As already stated, I am now booked for most of my time through the month of January but have not dared go beyond that, save for scattering engagements, until I should know what

your instructions will be concerning the coming session of the General Assembly. If ordered to spend a goodly part of my time at Trenton this season, the educational program will necessarily have to be suspended for several months, unless you wish to provide assistance to carry it on.

(3) Anti-vaccinationists and Cultists. We have had 2 important public contests on hand which may be of interest to you:

(a) The anti-vaccinationists have been very active in some parts of the state and, upon invitation of the Secretary of the Passaic County Medical Society, I engaged to address the Parent-Teachers' Association at Haledon, a suburb of Paterson, on the subject of Vaccination as a Defense Against Smallpox, using a moving picture film, "One Scar or Many", loaned to us by the Metropolitan Life Insurance Company. The meeting developed into something like a Donnybrook Fair but we believe it resulted satisfactorily since we secured considerable newspaper publicity for the small-pox elimination campaign and, more important, secured a decision from the local Board of Education, that children will not be permitted to enter the schools until they present evidence of successful vaccination.

(b) In the public letter column of the Atlantic City Press, we have been engaged in a controversy with a small group of chiropractors and naturopaths. My secretary caught up a published letter asserting that the State Medical Society was persecuting a number of honest drugless healers. I challenged that statement, denied that the State Medical Society, was either persecuting or prosecuting anybody and pointed out that such prosecutions as had been instituted by the state authorities were instances in which alleged drugless healers have been caught in the act of prescribing drugs or performing operations. In a second letter from the other side, an attempt was made to becloud the issue, but I replied by calling them back to my explanation and demanding the presentation of names and other facts connected with any prosecutions not based upon violation of existing law. A third letter from them followed in which violation of the law is admitted but the claim set up that the present law is so unfair that they are justified in breaking it; to which argument the obvious answer was that all lawbreakers might excuse themselves in the same fashion. Their most recent letter submitted the names of one naturopath and one chiropractor who had been, as they thought, prosecuted unfairly. This letter gave me the opportunity to quote from the records that in both instances the parties were prosecuted for "practicing medicine without a license," and the evidence submitted proved them guilty of doing things outside of their claims when they sought a limited license as special healers. It also gave me an opportunity to explain to the public why the medical profession insists that persons desiring to practice medicine, in any form, should be required to give evidence of possessing education in the fundamental branches of medical science—atomy, physiology, and pathology—such as would enable them to recognize the difference between health and disease in man before attempting to offer him treatment.

I question very much the advisability of entering into newspaper disputes of this character but this seemed to be an instance where some response from a representative of the State Society was actually demanded.

(4) Interstate Conference. At our last meet-

ing you authorized pursuance of my plan for an interstate conference between certain officers of the Medical Society of New Jersey, New York, and Pennsylvania. That conference was held November 7 and, while not as fully attended as we might have hoped for, accomplished as much at least, it started something and I believe the results of that first session were of such nature as to justify its having been held and to make reasonably certain that the project will be continued with mutual benefit to all three state organizations. The minutes of that conference will be published in the January Journal, so I need not go into great detail concerning it at this moment. The principle subjects under discussion were, amendments to existing medical practice acts, workmen's compensation, supervision and control of private hospitals, and the nursing situation. There was general concurrence in the view that as regards the three last mentioned topics conditions are very similar in the three states and that by coöperation it might be possible to procure something like uniform legislation in these matters. As to the medical practice act, New York will be seeking some marked changes in her law this year, while Pennsylvania will be confronted by a similar necessity and similar opportunity in 1927. There was general agreement that a law embodying the principle set forth in the Kelly Article is desirable but no one felt that it is immediately attainable in either state. The general opinion expressed was to the effect that the desired end would have to be approached by slow stages, perhaps by securing a series of amendments until the law is perfected. Personally, I am not at all sure that such is the best mode of procedure. The Pennsylvania delegate, describing conditions that arise whenever the Assembly is asked to amend the Medical Practice Act, used an expression that has become familiar to most of us; he said that "legislators are tired having the Medical Practice Act brought up at every session", and they had repeatedly asked "why don't you men get together, decide on something definite, and have this agony overwith?". In that question, it seems to me, we have the way to possible success clearly pointed out. Would we not, most quickly, attain our object by drafting an ideal bill, spending some time educating the public to understand the proposed act and its objects, and then seeking its adoption?

(5) A. M. A. Conference. In the latter part of November I had the privilege of attending, with Dr. Morrison, the American Medical Association meeting of state Secretaries and Editors, at Chicago. These conferences proved most interesting and instructive and will, I hope, show their beneficial effect in our future work. The one all important thing stressed at that conference, and which is strongly supported by my personal experience, is the necessity for much educational effort both inside and outside of the medical profession. I am endeavoring to bring about some demonstration examination clinics in the larger counties and it has been suggested, by Dr. George Tracy, that the State Society Program Committee be asked to arrange for such a demonstration at the next annual meeting to help instruct members as to the importance of this work, as to its routine technic, and as to its possibilities from an humanitarian point of view. If this cannot be done as a part of the regular scientific program, the time for which is now all too short, I am inclined to suggest that such a demonstration be conducted as a sideshow to

the big meeting. In this connection, it occurs to me to ask whether this committee would endorse a plan for the preparation of a moving picture film demonstrating a proper health examination and to be exhibited before county society meetings? I do not believe the cost of such a plan would be very great.

On the matter of health examinations, and on all other matters considered at this conference the key-note might be said to have been education and stimulation of our own members. Among the suggestions presented that seem worthy of your attention at this moment, I would especially mention two; The first is that copies of the A. M. A. health examination manual should be distributed by the State Society to all the members of the organization; this would cost the New Jersey association about \$500.00. The other suggestion was that a copy of Fishbein's Medical Follies should be sent by the state association to each member of the state legislature; a procedure that would cost in this state about \$100.00. I am inclined to think the latter suggestion deserving of more serious consideration than the first, at this moment.

(6) Coöperation with State Organizations. Two other possibly important conferences have been held at the instance of your Secretary during the past few weeks. I spent more than an hour in communion with Mr. Burdette G. Lewis, of the Board of Institutions and Agencies, with the object of bringing about a closer association between that state bureau and the State Medical Society. The interview was pleasant in every way and while no definite program was even discussed, we found that there are several points of interest to the development of which we might give coöperative effort.

The second conference was with the director of the State Board of Health and was based upon the idea that there should be a closer affiliation between these two bodies engaged in promulgating health education. Dr. Costill thinks it possible that his Board can work with us in developing our educational program and I felt sure you would approve of my working in association with his office and with the State Society's Committee on Public Health and Sanitation. I have since had a short talk with the Chairman of that Committee, Dr. Gordon K. Dickinson, and a general conference is being arranged to take place in January.

Drs. Costill and Dickinson were good enough to confer with me during the recent meeting of the State Sanitary Association at Asbury Park and we have made tentative arrangements to run a new department in the Journal, a department devoted to the relationship of the active practitioners to state and local Boards of Health; with a little activity on the part of the State Society's special committee and use of the mass of authoritative information at the command of the Director of Health, we should be able to get over an important and helpful message each month.

(7) The Journal. The editorial work progresses satisfactorily, save that I have not been able, recently, to give it the full amount of attention it deserves, owing to the amount of time consumed by the educational program. However, next to the Journal, I considered the educational activities, public and professional, as the most important work now before the State Society and would respectfully suggest that all this work be continued and pushed vigorously.

Beginning with the January issue, the Journal



will be changed in page size to conform to that of all the other State Society Journals, that is to say, it will change from its present form of 7x10 to the new form of 8x11 inches. Several new features will be introduced in the make-up of the Journal but as they will speak for themselves next month it is not necessary to take up your time with such details now.

(8) The Doctor's Title Bill. In accordance with instructions received at your last meeting, I requested every member of this committee to seek an expression of opinion from his county society as to the advisability of reintroducing, at the coming session of the legislature, the so-called "Doctor's Title" Bill, and, at the same time, I requested the officers of each county society to see to it that their respective organizations gave instructions concerning this question to their representatives on this committee. In those counties whose meetings I personally attended during October and November I saw to it that action was taken upon this question. From a few of the other counties action has been reported in the society's proceedings sent to me. From most of the other counties, however, I have received no response and their representatives will probably report direct to this committee. Insofar as I have been informed on the results of the plebiscite, of 12 counties reporting, 6 have voted in favor of re-introduction, (Bergen, Burlington, Cape May, Essex, Sussex, Warren), 4 have voted against such a course (Atlantic, Camden, Gloucester, Hunterdon), one has voted both ways, (Hudson), and one to leave the decision to this committee, (Union).

(9) New Business. There are several communications to lay before you at this meeting:

(a) We are informed that early in January a conference will be held in Trenton to consider the proposed Birth Control Bill which will be re-introduced to the General Assembly this season, and we are invited, along with most of the public welfare organizations of the state, to send a representative to that conference.

(b) The Holstein-Friesian Dairymen's Association has offered to cooperate in our public health education program and expresses a willingness to submit articles specially prepared for the press and to be used as we see fit in disseminating information relating to the value of milk as a food and the importance of securing good clean milk. The Association would also furnish speakers if we desire their assistance for public meetings.

(c) Physicians' Home. As many of you know a movement has been started to procure an endowment fund for the support of a national physicians' home. These plans were recently endorsed at an inaugural meeting of the National Campaign Committee in New York, participated in by such eminent members of the profession as Drs. Work, (Secretary of the Interior), Mayo, Lambert, and Morris and such laymen as Chauncy Depew, Elihu Root, and Cardinal Hayes. We are asked to participate in this campaign.

(d) A communication is received from Dr. Arthur MacDonald requesting our support in the effort to secure congressional action upon a bill designed to "establish a laboratory for the study of abnormal classes".

(10) In conclusion, I would like to exhibit a scrap book started during the last annual meeting of the State Society, to show in some measure the amount of publicity gained by the State Society. This does not include the news-

paper presentation of our radio talks nor the extent of publications of our lay addresses, but it serves to show that we are securing a satisfactory measure of publicity for this work. To summarize this report: I believe our educational program is progressing satisfactorily. By a series of conferences we are bringing about coöperation between the State Medical Society, on the one hand, and the State Board of Medical Examiners, the State Board of Health, the State Bureau of Institutions and Agencies, and the Medical Societies of our neighboring states of New York and Pennsylvania, on the other. I would recommend furtherance of these educational and coöperative efforts, because I believe that more benefit will accrue to the profession, in the long run, from these means than from any legislation possibly obtainable.

PRACTITIONERS RELATION TO  
BOARDS OF HEALTH.

CULTURES FROM SUSPICIOUS CASES OF  
DIPHtheria ARE SOMETIMES  
NEGLECTED.

Henry B. Costill, M.D.,  
Director of Health, Trenton, N. J.

Evidences of a dangerous practice recently were brought to the attention of the State Department of Health. It was learned that some physicians, finding a suspected case of diphtheria among their patients, failed to take cultures of the nose and throat to determine positively the presence of diphtheria bacilli, preferring to await the development of definite clinical symptoms before making a diagnosis. In many of such cases the disease does not progress so as to give a clinical picture of diphtheria. The patient recovers without the use of antitoxin, but during this time, and later, he is a menace to his family and the community.

This practice of neglecting cultures is dangerous both to the patient and the public. Depending upon clinical evidence for diagnosis is unwise because delays in making a diagnosis allow the disease to progress without early treatment with antitoxin. It is generally known that deaths from diphtheria do not occur when antitoxin is administered on the first day of the disease, but that the fatality rate of the disease increases with each day's delay in administering antitoxin. The physician harms his patient by delay, but he may harm himself as much. Let other members of the family contract the disease through his failure to do everything possible to protect them, and the attending physician's reputation may suffer irreparable harm. Dangerous as is delay to the patient, failure to take specimens is even more dangerous to public health. The two most potent sources of the spread of diphtheria are the missed case of the disease—usually mild—in which a positive diagnosis is neglected, and healthy carriers of the disease.

The mild case which makes an uneventful recovery may continue to harbor the virulent diphtheria bacilli in his throat or nose, and so be a source of the spread of the disease when he again mingles with his fellows. The only known way of detecting the presence of these organisms in

the throat of suspicious cases is by the microscopic examination of cultures from the nose and throat. Practicing physicians owe it to the communities which they serve to take such specimens in every suspicious or suspected case of the disease.

It is not only the moral duty of the physician to take such cultures, but it is his legal duty as well, for the State Department of Health enacted as a part of its sanitary code the following regulation:

**Regulation 12.—Diphtheria; material for cultures to be submitted.** In every case of illness which there is reason to believe may be diphtheria, it shall be the duty of the attending physician \* \* \* to take cultures forthwith from the throat and nose of the person suspected of being infected, or to permit the health officer or his representatives to take such cultures. Provided, however, that if such cultures are forthwith taken by the health officer having jurisdiction, or his representative, it shall not be necessary for the attending physician or nurse to take such cultures. Such cultures shall be immediately submitted by the person taking the same, for examination, to the State Laboratory of Hygiene, or to a laboratory which has been approved by the Director of Health of New Jersey.

The State has given special privileges to the physician in that only he may treat the sick. In return for these privileges the State makes certain demands: one is that he abide by the rules of the State Department of Health. Undoubtedly many practicing physicians are unaware of the provision of the State Sanitary Code quoted above. Attention is called to it, so that physicians may take this precaution so important to the health of the public. Diphtheria is still far too prevalent a disease, in the light of our present knowledge as to the means of effective prevention and treatment. We cannot afford to ignore one of the most potent causes for its continued spread.

## Communications.

### A VISIT TO HARVEY CUSHING'S CLINIC.

(Letter from John Hammond Bradshaw, M. D., Orange, N. J.)

About the tenth of November I spent a day at the Peter Bent Brigham Hospital, Boston, as a guest of Doctor Harvey Cushing and a short account of his work may prove interesting.

The hospital is, as you know, annexed to the Harvard Medical School, being, in fact, a part of that institution and being situated only a few hundred feet away from those beautiful white marble buildings where the Harvard Medical students get their medical milk.

Doctor Cushing met me in the library of the hospital about 10 o'clock and was very cordial in his greetings, although I had never seen him before. He is a man appearing about 55 years of age, with iron-gray hair. He told me that he had but one operation at that time to show me, but that it would take the rest of the morning to finish it up, as it was a transsphenoidal operation for a cystic tumor of the pituitary body.

My introduction to his operating room gave me a slight shock for I there found his nurses and assistants arrayed in blue operating gowns. Blue also was the prevailing color of the sheets

and coverings for the instrument tables and of the caps and masks worn at the time of the operation.

The patient was a young man, about 30 years of age, a bank clerk presenting the characteristic symptoms of acromegaly. He first became aware of failing health when he found it difficult to see the figures on the pages of his ledger. His fingers and toes were clubbed and the growth became evident when cerebral symptoms, such as dizziness and headaches, increased. A most exhaustive history of the case was read by the House Surgeon from a typewritten page, all possible and almost all impossible examinations of his case having been made. A line of several x-ray pictures of his cranium and brain were in constant view on the light-box in the room. Ether was administered through a laryngeal tube introduced through the mouth and operated by an electrical apparatus. The upper lip was everted and a one-half inch incision made over the 2 upper central incisor teeth. This incision was deepened gradually in such a way that no hemorrhage resulted, special instruments being employed. By working mostly with blunt instruments and rongeur forceps, the vomer and central portion of the sphenoid bone was penetrated. Being fortunately placed within 12 in. of the operator's hands I could clearly see without difficulty each successive step of the operation, although the deep wound had hardly the diameter of a large bougie. This clear view was made possible by a set of specially designed specula which Doctor Cushing invented and employs. Due particularly to the avoidance of blood-vessels and operating in the median line, and also to continuous use of the electrically driven sucker, the field of operation was kept constantly dry so that every step was taken under the guidance of the eye itself.

It was not a rapid operation, although Doctor Cushing was evidently working at high tension and with no loss of time by making false moves. About one hour elapsed before the dura at the base of the brain became visible. The doctor then made an incision in the protruding dura through this channel, approximately 6 in. deep, and evacuated about 15 c.c. of straw-colored serum, which he said was evidence that he had entered the cyst. By specially designed instruments he then removed the tumor of the pituitary gland demonstrating the growth to be about the size of 2 marrow-fat peas.

I obtained a clear view through the speculum, over Doctor Cushing's shoulder, of the pulsating vessels at the circle of Willis, a wound of any of whose branches, in my humble opinion, would have caused uncontrollable bleeding and speedy death of the patient. What gave me the greatest amazement during the entire operation was the ability to operate through such a narrow channel and to visualize pathology at so great a depth; almost in the center of the brain itself. The speculum being removed, the whole of the wound was perfectly dry, without hemorrhage, and 2 small silk sutures closed the wound and the operation was finished.

The prognosis, upon my asking Doctor Cushing, was said to be excellent. He told me that vision would return at once, and, when I asked about the possibility of return of the tumor, he said it would be no more likely to return than an extirpated thyroid gland. When I expressed amazement that such a wound required no drainage, he remarked that he never drained his brain surgery.



## NEW FINANCIAL ARRANGEMENTS.

(Letter from the Treasurer, Dr. Marsh.)

The Committee on Finance and Budget desires to call the attention of all officers and Committee Chairmen to the new financial by-laws adopted by the Society at the annual meeting last June (Transactions p. 61) and the following regulations adopted by the committee to give them effect:

(1) The fiscal year 1926 will begin January 1, and end May 31.

(2) Budget appropriations will be pro-rated accordingly, each appropriation for the year thus defined being regarded as five-twelfths of the amount given in the budget adopted at the annual meeting of June, 1925.

(3) Each office and committee will be expected to limit itself to this proportion of its total appropriation, exception being made in cases where a disproportionate amount of the year's work is done within the period named.

(4) All bills must be sent to the Chairman of the Finance Committee for approval, without which they cannot be paid (By-Laws). No bill will be approved or paid, in excess of the budget allowance, unless a supplementary credit has been obtained in advance from the Committee on Finance, as provided in the by-laws.

(5) All printing and stationary, to be charged to the budget account so designated, must be ordered through the Recording Secretary; otherwise it will be charged to the account of the office ordering.

The Chairman of the Committee is Dr. James S. Green, 463 North Broad Street, Elizabeth, to whom bills for approval and requests for additional credit should be sent.

## LETTER FROM THE BOARD OF MEDICAL EXAMINERS ANNOUNCING RECENT PROSECUTIONS.

Nov. 4, 1925—Vernon P. Cox of S. Virginia Avenue, and Herman Staller of Pacific Avenue, Atlantic City, were tried in the District Court of Atlantic City and judgment has been entered in each case for the penalty and costs. Each practiced Electro-Therapy.

On the same day—Lou Lashley, a masseuse who also gave drugs, was tried on a charge of practicing medicine. Decision was reserved and the Court has found her not guilty. The Board will appeal.

On the same day—George C. Lezenby, Jr., who practiced Electro-Therapy, pleaded guilty to a charge of practicing medicine without a license and paid the penalty.

Nov. 10, 1925—John Lembeck, of Jersey City, who prescribed and sold herbs was convicted on a charge of practicing medicine without a license, in the First District Court of Jersey City, and judgment entered. On refusal to pay the penalty was committed to jail for 10 days.

Nov. 10, 1925—George Gese, proprietor of the Star Herb Company of 62 Franklin Street, Jersey City, was tried on a charge of practicing without a license in the First District Court of that city and judgment entered for the penalty and costs. Defendant has appealed.

Nov. 10, 1925—Louis Koomos, an unlicensed chiropractor of Oradell, N. J., pleaded guilty in the East Rutherford District Court to a charge

of practicing medicine without a license and paid the penalty and costs.

Nov. 20, 1925—Ada E. Blaisdell, an unlicensed chiropractor of Vineland, N. J., pleaded guilty in the Court of Common Pleas, Bridgeton, N. J., to a charge of practicing medicine without a license and paid the penalty and costs.

Nov. 20, 1925—Ellsworth Pierce, a naturopath of Bridgeton, N. J., was tried in the Court of Common Pleas on a charge of practicing medicine without a license and judgment entered for the penalty and costs.

Dec. 1, 1925—Algia Burroughs and Philip Tremmel, unlicensed chiropractors of Newark, pleaded guilty in the First District Court of Newark, to a charge of practicing medicine without a license and each paid the penalty.

Dec. 9, 1925—Stanley I. Guzowski, an unlicensed chiropractor of Trenton, N. J., pleaded guilty in the District Court of Trenton, to a charge of practicing medicine without a license, and paid the penalty and costs.

Dec. 11, 1925—Dagmar S. Ackerman, an unlicensed chiropractor of Paterson, N. J., and Alex. Vekony, an unlicensed chiropractor of Passaic were tried in the Passaic District Court on a charge of practicing medicine without a license and judgment was entered in each case for the penalty and costs.

Dec. 14, 1925—Clarence Drake, who practiced chiropractic in Morristown, and his wife, Mary Drake, who practiced in Dover, N. J., pleaded guilty in the Morristown District Court to a charge of practice without a license, and each paid the penalty.

Dec. 14, 1925—Sussie Pallay, an unlicensed midwife of Carteret, was tried for the third time in the New Brunswick District Court, on a charge of practicing midwifery without a license, and the decision was reserved.

Dec. 17, 1925—Lilla Porter, who practiced chiropractic in Morristown and Boonton, was tried on a charge of practicing midwifery without a license and decision was reserved.

Dec. 22, 1925—Louise Turner, an unlicensed chiropractor of East Orange, pleaded guilty in the First District Court of Newark to a charge of practicing medicine without a license and paid the penalty and costs.

Dec. 23, 1925—Nathan Kessler, druggist of Newark, in the First District Court of Newark, pleaded guilty to a charge of practicing medicine without a license and paid the penalty and costs.

Dec. 23, 1925—Max Blindt, an unlicensed chiropractor of Newark, pleaded guilty in the First District Court of Newark to a charge of practicing medicine without a license and paid the penalty and costs.

Dec. 29, 1925—Frona Bowen, of Riverside, N. J., pleaded guilty in the Court of Common Pleas, Mt. Holly, to a charge of practicing medicine without a license, and paid the penalty.

Jan. 7, 1926—Hugh and Electra Anderton, of Jersey City, each pleaded guilty in the First District Court of Jersey City, to a charge of practicing medicine without a license, and each paid the penalty.

Jan. 12, 1926—Rennatti Spinelli, a druggist of Newark, pleaded guilty in the First District Court of Newark, to a charge of practicing medicine without a license, and paid the penalty.

Jan. 15, 1926—Benjamin Wooding, of Montclair, was tried in the Orange District Court on a charge of practicing medicine without a license and decision reserved.

Alex. MacAlister, Secretary.

## Observations from the Lighthouse.

### MERCUROCHROME-220 SOLUBLE.

The extensive advertising this preparation has received for sometime past, and the impression that it is being widely used as an antiseptic in a great variety of conditions, suggested the idea of making some search of the recent literature to ascertain what degree of success is attending its employment and for what conditions it may be most hopefully applied.

Accordingly, we have looked up all of the abstracts of articles relating to Mercurochrome published in the Current Medical Literature Department of the Journal of the American Medical Association during the year 1925, and the similar abstracts published in Surgery, Gynecology and Obstetrics for the last six months of 1925—July to December inclusive. We have arranged the abstracts thus collected into groups and present them here to illustrate the various clinical or experimental uses of the drug and the results obtained in these various fields.

Inasmuch as the most elaborate report on Mercurochrome and its clinical uses appears to be the study emanating from the Johns Hopkins University Hospital, where a very thorough study was made by Young and his associates, it may be well to present first an abstract (from Surg. Gyn. & Obs., Oct., 1925, 41:330) of their report on "The Treatment of Infections and Infectious Diseases with Mercurochrome-220 Soluble; an analysis of 210 Cases that Furnish Many Definite Examples of a Therapia Sterilisans Magna" (Arch. Surg., 10:813, 1925).

The drug mercurochrome-220 was selected for its antiseptic effect from 260 substances investigated. It was found that dibromfluorescein could undergo substitution by the germicidal group, and mercury was chosen as the active germicide to be substituted in the dye molecule. The irritating effect of mercuric chloride is due to the mercury ion. If the metal is substituted in an organic compound, such as an acid dye, the mercury no longer yields ions and all tests for mercury in the compound are negative.

Following the local application of the 1% solution, tissue sections of the urethra, bladder, ureter, and kidney show the epithelial cells deeply stained. In places, the submucosa also is stained, and at times even the muscularis is penetrated. The epithelium of the glands emptying into the urethra is stained for some distance.

With regard to toxicity it was found that 10 mgm. per kilogram of body weight killed rabbits in 24 hours. Dogs could tolerate this dose with no apparent ill effects. In each case there was a slight albuminuria with a reduction in the phenolsulphonephthalein output, but no casts, increase in the urea content, or permanent damage to the kidney.

Following the intravenous injections, the bacteriostatic action of the blood against bacillus coli was increased and appeared to be greatest after 15 to 45 minutes. The bactericidal properties of urine following the intravenous injection of the drug were discussed by the authors in a previous article. The intravenous use of the drug in experimental syphilis in the rabbit has also been described. When it is given by mouth

it modifies the intestinal flora and brings about a decrease in the bacterial content. After its intravenous injection it was found to appear in the bile after about 15 minutes and was bactericidal in that medium.

The authors report in detail the histories of a variety of cases, some of their own and some those of other observers. In 57 cases of septicemia from various causes in which mercurochrome-220 was given intravenously the treatment resulted in a cure in 34, failed in 19, and was of doubtful value in 4. Of the patients who died none received more than 2 injections of 5 mgm. per kilogram. Of 21 patients with pneumonia, 18 recovered and 3 died. Of 4 with perinephritis, all recovered. In 23 cases of pyelonephritis there were 220 cures and 3 failures. In 3 cases of cystitis and prostatitis the treatment was followed by recovery in 2 and failed in 1. One case of chronic chancroidal infection which had resisted all other methods of local and general treatment was promptly cured. In 23 cases of gonococcus infection there were 13 cures and 10 failures. A cure was obtained in 10 of 12 cases of gonorrheal arthritis; in 2, the results were doubtful. Of 5 cases of multiple arthritis, 4 were cured and one was benefited.

Eight cases of erysipelas and 4 of furunculosis were cured. In 17 cases of cellulitis there were 14 recoveries, one death, and 2 doubtful results. Both of 2 cases of extensive pemphigus were cured. Of 3 patients with phlebitis, one was cured and one died; in the other the results were questionable. Five cases of typhoid fever, 2 of acute anterior poliomyelitis, and 2 of epidemic encephalitis were cured.

Of 6 cases of meningitis, 2 were cured and 4 were fatal. One case of Rocky Mountain fever and one case of bubonic plague were cured. Of 14 cases of pneumonic and bubonic plague 2 were cured but in the rest the results were doubtful. In these cases only one injection of mercurochrome was given. One case of scarlet fever was cured. In 3 cases of pulmonary tuberculosis there were 2 failures and one doubtful result. Of 4 patients with peritonitis 2 died and one was cured. In one case the response was doubtful.

In 44% of the cases there was a general reaction following the injection of the drug. This may be slight or severe. Diarrhea followed the injection in about the same percentage of cases. In 21.4% stomatitis developed after repeated injections. Six cases showed no reaction, and in 5 of them there was definite clinical improvement. As a rule, when small doses are given there is no reaction after the first injection. If fever is present and 5 mgm. per kilogram are given, there is usually a marked febrile reaction followed by a drop in the temperature to normal.

Two deaths followed injection of the drug. One, which occurred in a case of chronic osteomyelitis, followed the second injection and was probably due to embolism. The other occurred in a case of severe pemphigus 24 hours after the injection.

The authors have guarded against overenthusiasm in this review, and admit that, although effort was made to acquire a review of all results, both good and poor, it is probable that many negative results were not reported.

With regard to the technic, they state that the 1% solution in freshly distilled water was employed. This should not be boiled. In infants the peritoneal cavity may be used. The dosage



advised is 5 mgm. per kilogram of body weight, but in some cases favorable results followed repeated smaller doses. The reaction usually occurs in 3 to 4 hours. In rare cases there may be evidence of shock requiring the use of restoratives.

#### Penetration of Tissues.

Hirschfelder, Malmgren and Creavy (Jour. Pharm. & Exper. Ther., 24:459, 1925) attempted to determine to what extent these substances are excreted or diffused from the blood into areas in which the tissues are injured or diseased, and whether if they do penetrate into such injured tissues, they do so in concentrations that are antiseptic or bactericidal to the common pathogenic organisms, e.g., the staphylococcus or colon bacillus. It was found that both mercurochrome-220 soluble and acriflavine penetrate gradually from the blood into the edema, mercurochrome more rapidly and in higher concentration than acriflavine. When doses proportional to those used clinically are employed, these drugs do not render the edema fluid bactericidal or bacteriostatic. No evidence was found to indicate that gentian violet penetrates from the blood into the edema fluid. In the light of these findings, it is questionable whether injections of these drugs in these concentrations could be expected to influence the course of local and general infections encountered in clinical practice.

Mercurochrome as a skin disinfectant—using the alcohol-acetone-aqueous solution made by dissolving mercurochrome 2 gm. in distilled water 33 c.c. and then adding 55 c.c. of 95% alcohol and 10 c.c. of acetone—is recommended by Scott and Hill (Jour. Urol., 14:135, Aug., 1925) as a very efficient preoperative disinfectant. Better skin sterilization is obtained with it than with iodine, potassium mercuric iodide and picric acid. Its application is accompanied by no pain and is, therefore, of special value in operations done under local anesthesia. Regardless of the age of the patient or location of the operative field, no instances of dermatitis have occurred following its use. The solution penetrates more deeply than iodine and potassium mercuric iodide. It penetrates at least as deeply as picric acid and seems to be a little more uniformly distributed at its lower level of penetration. It retains its high bactericidal properties at least 46 days. It has a relatively low toxicity. The color of the preparation is such that there can be no doubt as to the extent and thorough preparation of the operative field. It should not be objectionable on account of its stain because the solution completely dries on skin in less than 2 minutes. Any stains accidentally obtained are readily removed by surgical solution of chlorinated soda.

#### Intravenous Injections.

The Treatment of Infections with Intravenous Injection of Mercurochrome (Surg. Gyn. & Obs., 60:97, Jan., 1925) is again presented by Young in a review of 255 cases. These cases included puerperal sepsis, septicemia, erysipelas, genitourinary infections, gonorrhea, pneumonia, local infections, typhoid meningitis, epidemic encephalitis, multiple arthritis, gas gangrene, acute osteomyelitis and psoriasis. The percentage of recoveries was 42.3; marked improvement resulted in 38.8% and failure in 25%. Slightly more than two-thirds of the failures occurred in cases of gonorrhea.

Somewhat in contrast to this, we have Piper

reporting his experience with Blood Stream Infections Treated with Mercurochrome (Am. Jour. Obs. & Gyn., 9:17, Jan., 1925) and saying that he does not believe this method of treatment constitutes the last word by any means in these conditions, but recognizing it as a step in the right direction. Piper stresses the fact that in spite of reports of brilliant recoveries, this is undoubtedly a dangerous procedure and is warranted only by the severity of the condition. Its promiscuous use is to be discouraged, as this will unquestionably bring into definite disrepute whatever merit the treatment may possess.

In a later article (Am. Jour. Obs. & Gyn., 10:371, Sept., 1925) Piper further advises caution. Its use in puerperal septicemia per se is most discouraging, though there have been some good results. In spite of various investigators who contend that the penetrability of some synthetic preparation will eventually solve this problem, Piper is of the opinion that there is some other, at present unknown, factor, which must first be determined before blood-stream infection may be eradicated successfully. No intravenous medication will avail without common sense surgery.

Brill and Myers, (J. A. M. A., 84:879, 1925) report clinical observations made on three cases of bacteremia and 2 cases of local gonococcal infections treated by intravenous injections of mercurochrome and gentian violet. These observations, carefully controlled by cultural checks, seem to indicate that the intravascular injection of the dyes in no way interfered with the progress of the infection.

In experiments on the effect of concentrations of 1:10,000 of mercurochrome and gentian violet on the growth of staphylococcus, streptococcus, and bacillus coli in vitro, the dyes appeared to have no direct bactericidal action on these organisms in a period of 3 hours. The concentration used represents the maximal advisable concentration of these dyes in the circulation.

Gatch, Trusler and Owen (J. A. M. A., 85:894, Sept. 19, 1925) have presented an excellent report on their experimental and clinical work with mercurochrome and gentian violet in the Treatment of General Septicemia, and their comments on the therapeutic value of mercurochrome are interesting: "The general trend of opinion in those who have reported cases treated by gentian violet and mercurochrome intravenously is that, at times, startling results may be obtained; but there are failures almost equally numerous. The cases reported in the literature and in the opinions of the writers will total about 40% definitely improved, 20% possibly improved, and 40% unimproved. In one or two patients receiving mercurochrome, 5 mg. per kilogram, we have noted diarrhea, ptialism and other evidences of mild mercurial poisoning. Other than that, we have observed no serious untoward results from the injection of either drug. There is, however, much evidence in the literature that mercurochrome is by no means an innocuous drug, and indiscriminate administration is to be discouraged.

Following the intravenous injection of either mercurochrome or gentian violet, there is apt to be a sharp temperature reaction, sometimes a chill. Following this, in favorable cases, the temperature falls rapidly and the improvement is marked. We have observed 5, or 6 cases so treated in which the recovery appeared miracu-

lous; but appreciating the extremely variable course which septicemias display, we hesitate to place too much confidence in uncontrolled clinical observations concerning the effect of a specialized treatment. Either drug, when properly employed, will exert a temporary bacteriostatic action in the blood stream. The ultimate benefit to be derived from this retardation of the infection depends on the resistive powers of the animal.

That complications may arise out of the use of mercurochrome, even aside from the dangers of intravenous medication, is illustrated by a report from Wade (*Northwest Med.* 23:508, Nov., 1924), who describes a case of severe stomatitis and acute nephritis following the use of mercurochrome-220 soluble. The drug was injected 3 times weekly into an ovarian cyst cavity, 1 ounce of a 5% solution being used. After 3 weeks' use of this solution, the patient began to complain of soreness in her gums and moderate salivation. The mercurochrome was immediately discontinued but the stomatitis continued to grow worse. Her breath became extremely foul, the teeth loosened, and her mouth became so painful and tender that she could scarcely talk. She had some nausea and diarrhea, which lasted several days. She developed some edema of the face and ankles, and the urine contained albumin and casts. The drainage from the cyst continued profusely and continued to be stained a deep red color for more than 2 weeks after the use of mercurochrome had been discontinued. The patient gradually recovered. Following the removal of the cyst, the patient developed an acute streptococcus septicemia and died on the fifth postoperative day. A necropsy showed the absence of a diffuse peritonitis, and the operative field appeared clean.

#### Employment in Genito-Urinary Diseases.

Potter (*U. S. Naval Med. Bul.*, 22:542, May, 1925) says that mercurochrome-220 soluble can be administered very advantageously in ambulatory cases by giving smaller doses over a longer period than usual with longer intervals between injections, and that definitely positive results may be obtained. This report is based on results obtained from treating 77 such patients.

Johnson (*Boston M. & S. Jour.* 192:353, Feb. 19, 1925) claims to have obtained excellent results in gonorrhea of the female genital tract by using vaginal suppositories containing 2% mercurochrome-220 soluble. A suppository is placed in the posterior fornix every night for 14 nights. The mercurochrome thoroughly permeates the lining structures of urethral, vaginal and cervical membranes.

Mercurochrome-220 soluble in 5% solution has been used by Rupel (*Indiana State Med. Jour.* 18:89, Mar. 15, 1925) in 104 early cases of gonorrheal infection. There is no evidence of harm having been done by the procedure. The duration of trouble is shortened considerably and the discharge is reduced to a minimum.

Swift relief from pain of an acutely swollen epididymis and rapid, apparent cure of severe gonococcus infection of the urethra are reported by Williams (*U. S. Naval Med. Bul.*, 22:677, June, 1925) following the use of mercurochrome intravenously in gonococcal infections.

Rolnick (*Jour. Urol.*, 12:445, Nov., 1924) found that mercurochrome is not a safe antiseptic to be employed during a vasotomy because it is an in-

tense irritant to the vas and produces permanent occlusion in the majority of cases.

#### Effect on Kidneys.

Hill and Bidgood (*Johns Hopkins Hosp. Bul.*, 35:409, Dec., 1924) injected rabbits intravenously with varying doses of mercurochrome and noted the effect on the kidneys. A mild reaction occurred in the kidneys which is directly proportional to the dose given. There was no actual destruction of tubular epithelium from doses as high as 7.5 mg. per kilogram of body weight, but with 10 mg. per kilogram there is a definite renal damage, so that it would be unwise to use so large a dose clinically. Repeated injections do not cause any added damage, and can be given, as in these animals, as often as twice a week with safety, provided a dose of 5 mg. per kilogram of body weight be not exceeded. The slight damage is not irreparable and at the end of 2 months the kidneys show no evidence of any previous lesion.

As regards the Treatment of Pyelonephritis, Bumpus (*Med. Clin. of N. A.*, 1925, 8:1103) presents a case of bilateral pyelonephritis and cystitis with rather marked irritability of the bladder of 6 or 7 years' duration in a woman 30 years of age. The patient had been examined at the Mayo Clinic 4 years previously and at that time several teeth were extracted which showed definite periapical infection. Animal inoculation of cultures obtained from these teeth showed a green-producing streptococcus with an affinity for the urinary tract. No relief was obtained from the removal of the foci, and at the patient's second visit cystoscopic examination of the bladder and kidneys showed the same conditions as were found previously.

Four doses of 4 mgm. of mercurochrome for each kilogram of body weight, or approximately 20 c.c. of a 1% solution, were given intravenously over a period of 10 days. The symptoms disappeared very quickly after the first dose. On cystoscopic examination immediately after the patient left the hospital the cystitis was found to be greatly diminished and the urine from the kidneys free from pus. The patient was ultimately relieved completely, and has remained well to date.

Tomkies (*Texas State Jour.*, 21:24, May, 1925) reports the treatment of 50 cases, wherein he obtained the best results in acute pyelitis, salpingitis and bilateral nephrolithiasis with infection.

#### Employment in Various Diseases.

For use in Obstetrics, Mayes (*Amer. Jour. Obs. & Gyn.*, 10:61, July, 1925) says at 4% solution for sterilizing the birth canal before delivery. A preliminary study of its use over a period of 8 months shows fewer days of morbidity than when iodine is used. Mercurochrome is particularly adapted for induced labor and for all operative deliveries.

The treatment of Chronic Malaria by a single intravenous injection of mercurochrome (0.003 gm. per kilogram of body weight) is advocated by Avison and Koo (*China Med. Jour.*, 39:419, May, 1925), who claim to have secured a cure in 100% of cases so treated.

Kingsbury and Kanagarayer (*Indian Med. Gaz.*, 60:355, Aug., 1925) report a case of benign tertian malaria in which a total of 0.3 gm. of mercurochrome-220 soluble was given over 3 days.



On the withdrawal of acetylsalicylic acid and 3 days after the last mercurochrome injection a typical rigor occurred, with a temperature of 102.9°F. A malignant tertian case received a similar quantity of mercuröchrome, and fever recurred 2 days after the last injection. The dye appeared to have little effect on the number of malaria parasites in the peripheral blood and caused no modification in their staining properties. In neither case did albuminuria develop. Kingsbury and Kanagarayer consider that the action of mercurochrome on malarial parasites is practically negligible, and that in view of the unpleasant sequels which many result from its exhibition, it should not be given in cases of malarial fevers.

Covington (Georgia Med. Assoc. Journal, 14:320, Aug., 1925) treated his daughter, aged 9, for an acute arthritis involving all the joints of her extremities, following an attack of tonsillitis, and reports a complete cure after one intravenous injection of 10 c.c. of a 1% solution of mercurochrome.

Wagner (Atlantic Med. Jour., 28:827, Sept., 1925) describes the use of this drug in treatment of Chronic Otorrhea. In the treatment of these cases he used mercurochrome, 5% in 50% alcohol, dropped into the canal and middle ear, the head resting on the side. The canal was tightly plugged with cotton to prevent outflow of the solution, which stains the skin. Of the 45 ears treated, 23, or 51.1% became dry after an average of 6.5 applications. Sixteen cases were recorded as improved; 6 were not. Eight definitely dry ears were secured in a series of 162.

Wilkerson (Texas State Jour. Med., 21:354, Oct., 1925) reports 2 cases of Acute Hemorrhagic Encephalitis of the cortex, in one of which recovery followed treatment with mercurochrome.

Corper, Mebel and Silver (Am. Rev. Tuberc., 12:156, Oct., 1925) found that mercurochrome-220 soluble given intravenously daily, over long periods, has no appreciable effect on the tuberculosis developing in rabbits after the intravenous injection of suspensions of virulent human or bovine tubercle bacilli, regardless of whether treatment is begun immediately or a week after infection. The authors conclude that the local tissue toxicity of mercurochrome-220 soluble in relatively low concentrations and its poor tuberculocidal and bacteriostatic efficiency would not seem to justify its use in the local treatment of tuberculous empyemas or pulmonary cavities.

Harris (J. A. M. A., 85:1967, Dec., 1925) relates a case of general septicemia resulting from a simple suruncle of the nose, in which recovery from a desperate situation was effected by intravenous injection of mercurochrome.

#### Remarks.

Undoubtedly many more articles than are referred to here have appeared during the past year; we have made no effort to search the literature beyond the limited source mentioned at commencement of this review. But, the statement made, that mercurochrome is being widely used and for a great variety of infectious conditions is borne out by even this degree of observation. That there are wide differences of opinion as to its value as a systemic antiseptic is also quite evident. A more extended employment, such as it seems likely to receive, will in time afford more definite conclusions.

## In Lighter Vein

Scientists have discovered that the bee is not busy; it just looks busy, they sneer. Another link connecting the human race with lower animals!

#### "From the Neck Down."

Lieutenant Gwyn, in the second seat, was in the water also unconscious up to his chin when taken out.—(Roanoke, Va., Times).

According to a new medical theory, baldness may be due to defective teeth. Where married men are concerned it may also be due to a defective alibi.—Judge.

Behind the Barn.—Smoke and the world smokes with you; swear off and you smoke alone.—Cornell Widow.

Has Mother Lost Her Job?—It's getting to the point where young husbands have to speak of the kind of bread grandmother used to make.—Life.

#### Forcing the Luck.

First Golfer—"I thought you couldn't turn up this afternoon?"

Second Golfer—"It was a very near thing, my boy. I tossed up to see if I should go to the office or come here; and believe me, it took five spins before it came right."—Pearson's Weekly.

#### Bought and Paid For.

It was an off hour among the caddies at the golf club.

"What kind of a score did that guy make you was totin' for today?" inquired Jimmy idly.

"Listen here," retorted Johnnie. "That gent gave me two bucks an' his score is whatever he says it is."—American Legion.

#### The Toggery Complex.

Although a great deal has been written about golf, nobody has yet put a finger upon the most important function of the game. Golf has liberated the sartorial suppressed desires of American manhood.—Chicago Daily News.

#### Nothing Else Mattered.

Porter—"This train goes to Buffalo and points east.

Old Lady—"Well, I want a train that goes to Syracuse, and I don't care which way it points. —Everybody's.

#### Amateurish.

Fritzie (in automobile)—"Good heavens, Joe; we've just run over a poor man! Stop! Stop!

Joe—"Keep still, gal; you'll make every one think this is the first time we've even been in an automobile.



G. Howard McFadden, M.D., F.A.C.P.  
1866-1925



Death.

McFADDEN, George Howard. On the morning of December 30, 1925, at his residence, 315 State Street, Hackensack, New Jersey, George Howard McFadden departed this life as the result of an acute angina pectoris. For some months past he had suffered recurring slight attacks but continued actively engaged in his work and was not apparently fearing any immediately serious result; in fact, it is reported that he was contemplating a vacation in the form of an ocean voyage.

Dr. McFadden was born in Hollidaysburg, Pennsylvania, May 10, 1866, the son of Samuel and Jane McFadden of that town. His early education was received in the grammar school of his native town and the Shortlidge Academy of Media, Pennsylvania, after which he entered upon his medical course at the College of Physicians and Surgeons of New York City. Engaging in the practice of his profession at Hackensack, New Jersey, he soon became one of the recognized leaders of the medical profession, his reputation as a consultant extending well beyond the confines of this state. In the business world, too, his talents were highly appreciated and he became Vice-President of the Peoples Trust and Guaranty Company, a Director of the Ridgefield Park Trust Company, and Director in the North Jersey Title Insurance Company.

Dr. McFadden was an active factor in developing the Hackensack Hospital, had served his community as Health Officer and as County Physician, and was a member of the following medical organizations: Fellow of the American College of Physicians; Fellow of the American Medical Association; Member of the Medical Society of New Jersey; Permanent Delegate from the Bergen County Medical Society; and Member of the Medico-Surgical Society of New York.

## County Society Reports.

### ATLANTIC COUNTY.

Joseph H. Marcus, M.D., Reporter.

The stated monthly meeting of the Atlantic County Medical Society was held Friday evening, January 8, 1926, being called to order by the President, Dr. D. Ward Scanlan.

Following reading of the minutes and the reports of the various committees, Dr. W. P. Conaway announced the election of Dr. J. T. White to membership. Applications for membership were read from Drs. Charles Cunningham, of Hammonton, and George J. Muellerschoen, of Atlantic City, which petitions were referred to the Board of Censors. A letter from Dr. R. J. Held tendered his resignation from the society, his present residence being in California. It was moved that his resignation be accepted.

Dr. T. B. Holloway, Professor of Ophthalmology at the University of Pennsylvania, presented as his subject, "The Orbit from the Standpoint of the General Practitioner", and urged the more frequent use by the general practitioner of the ophthalmoscope, the loupe and the condensing lamp, as diagnostic measures. Of the more frequent conditions encountered, Dr. Holloway discussed: (1) Disturbance of motility, which is more or less generally recognized and satisfactorily treated. (2) Exophthalmos, which condition is either congenital or acquired; the congenital element embodies congestive tumors that sometimes cause a defect in the orbital wall. (3) Cranial deformity, such as oxycephaly. In this condition of craniostenosis there is a failure of vision caused by optic atrophy; the symptoms and signs are failing vision, exophthalmos, divergence and nystagmus. The acquired type is occasionally caused by hemorrhage, and 60% of the cases depend upon diseases of the accessory sinuses. The complications in these types are cellulitis, thrombophlebitis, meningitis, abscess formation and emphysema. The intracranial causes are: (a) Brain tumors; (b) pituitary body disease; (c) thrombosis of cavernous sinus; (d) pulsating exophthalmos, of which two-thirds occur in males as a result of trauma and one-third in females, spontaneously in the vast majority of cases during pregnancy. Dr. Holloway suggested that in all types of orbital disease the physician make certain examinations in order to ascertain: (1) Direction of proptosis; (2) orbital pressure by palpating the eyeball; (3) use of the stethoscope to ascertain the presence of a bruit; (4) distinguishing the presence or absence of inflammatory symptoms; (5) careful examination of all accessory sinuses; (6) use of the x-rays; (7) examination of the fundus.

Dr. Holloway devoted the latter part of his time to a demonstration of lantern slides in which various interesting and typical eye lesions were presented. Some of the conditions exhibited were anophthalmos, infantile glaucoma, enormous abscess of the lid, congenital angioma extending into the orbit, cellulitis, carcinoma of the orbit, glioma of the retina, exposure keratitis, and pseudo-gloma. The presentation was discussed by Doctors H. L. Harley, A. Pilkington, and D. Ward Scanlan.

The scientific program was continued by Dr. Emil Novak of Baltimore, whose topic was "The Mechanism and Interpretation of Uterine Bleeding". Dr. Novak prefaced his remarks with a brief but concise outline of the study of normal menstruation, digressing for a brief period into

the realm of folk lore; also relating some experimental work which has been done in the study of normal menstruation proving that the ovaries are directly responsible for the physiologic process. In discussing uterine hemorrhage, the speaker stated that this was the most frequent symptom in pelvic organic disease and least in constitutional disturbances. The following classification was mentioned: (1) Anatomic variety, due to a destructive lesion in the pelvis such as cancer of the vagina, cervix or uterus. (2) Anatomic variety, due to chronic pelvic inflammatory disease; in which type there is often not sufficient evidence to explain the hemorrhage. (3) The functional cases, in which bleeding takes place without a demonstrable lesion in the pelvic organs.

Dr. Novak then displayed screen slides demonstrating the various types of pelvic disease such as: laceration of the cervix with ectropion of the mucosa, benign glandular polyp of the cervix; 3 types of cancer, (a) squamous-cell cancer (common variety), (b) adenocarcinoma of the cervix, (c) adenocarcinoma of the uterus. Various photomicroscopic sections of the different types of tumors were shown. He displayed the microscopic picture found in an incomplete abortion in which chorionic-villi are found and which Dr. Novak emphasized as pathognomic of pregnancy. The speaker's paper was discussed by Doctors W. E. Darnall, W. P. Conoway, W. J. Carrington, R. J. Kilduffe, N. J. Quinn and D. Ward Scanlan.

Upon proper motion the meeting was adjourned.

### Atlantic City Hospital Staff.

Joseph H. Marcus, M.D., Reporter.

The stated monthly meeting of the Atlantic City Hospital Staff was held at the Breakers on the evening of Jan. 17, 1926.

Dr. Theodore Senseman reported for the Nurses Committee, and D. B. Allman for the Interne Committee, while Dr. Richard Bew outlined the progress of the Building Committee. Dr. Senseman proposed a change in the present parking law as existing on Ohio Avenue, as the present method of parking makes it extremely inconvenient for the staff physicians to find a parking for their cars. A committee consisting of Drs. Senseman and Scanlan was appointed to investigate this matter. Dr. Richard Bew recommended to the Board of Governors, the appointment of the following personnel of the Staff: Dr. Richard Bew, President; S. L. Salasin, Vice-President; Joseph H. Marcus, Secretary-Treasurer; Medical Director, Richard Bew; Surgical Director, Theodore Senseman. Medical Chiefs: Richard Bew, E. C. Chew, S. Barbash and D. W. Scanlan. Associates: S. L. Salasin, C. L. Andrews, P. Marvel, Jr., and H. S. Davidson. Pediatricist: Joseph H. Marcus.

Surgical Chiefs: T. Senseman, H. I. Silvers, D. B. Allman and T. D. Taggart. Associates: J. H. Mason, H. Subin and J. Irvin.

Gynecologic Chiefs: W. E. Darnall, W. P. Conoway. Associate: E. Uzzell.

Obstetrician: M. S. Ireland, N. J. Quinn and J. Poland. Ophthalmologists: A. Pilkington, H. L. Harley and C. McGivern.

Otolaryngologists: C. C. Charlton and J. Pennington. Associates: E. Uzzell and C. D. Sinkinson.

Roentgenologists: W. C. Westcott and W. P. Davis. Associate: C. B. Kaighn.

Urologist: C. H. D. T. Shivers. Associate: C. L. Bossert.

Consulting Ophthalmologist: W. Frisch.



Consulting Pathologist and Serologist: John H. Kolmer, Philadelphia.  
 Pathologist and Serologist: Robert A. Kilduffe.  
 Oral Surgeon: B. B. Filer.  
 Director of Dispensary: J. H. Mason.

#### Dispensary Clinics.

Medicine: S. Rosenblatt.  
 Surgery: J. Irvin, S. Winn and H. Subin.  
 Gynecology: V. E. Johnson and J. C. Brown.  
 Obstetrics: V. E. Johnson and J. C. Brown.  
 Ophthalmology: A. Pilkington, H. L. Harley and C. McGivern.  
 Otolaryngology: C. C. Charlton and J. Pennington.  
 Diabetes: Hilton Reed.  
 Cardiology: P. Marvel, Jr.

A letter was read from Dr. Karl M. Scott in which he made application for position on the Urologic Service. It was moved and seconded that his letter be referred to Dr. C. H. Shivers, chief of the department, upon his return from Europe.

The first part of the Scientific Program was presented by Dr. M. S. Ireland reporting the Obstetric Service from May to August inclusive. The following statistics were recounted: Total number of cases private and ward 222, private cases 160, ward 62. Total hospital days 648, with average days to patients 10 in number. Of the 62 cases the positions were as follows:

Left occiput anterior, 48; right occiput anterior, 6; left occiput posterior, 2; breech, 36.

The following conditions were encountered: Forceps application, 5; still births, 6; monstrosity, 1; syphilis in mother, 15; cesarean section for central placenta previa, 2.

The following comprised a case report of "Ruptured Uterus". Adult female, admitted in critical condition with the chief complaint of generalized pain in the abdomen. Patient was vomiting and extremely weak, this pregnancy being the second, with history of a cesarean section for eclampsia in a previous pregnancy. The last menses took place January, 1925. Present illness commenced on October 22, when the patient complained of a sudden sharp pain in the abdomen and of being very weak. Had an increase in temperature and vomited. Condition became progressively worse, with abdomen becoming distended and extremely tender. Upon admission to hospital the temperature was 98, pulse 170. On physical examination the abdomen was found to be markedly distended and extremely tympanic in the upper part, with marked dullness in both flanks. Patient vomited at intervals and was bleeding from vagina. Death occurred one-half hour following admission.

At postmortem the abdominal findings constituted a macerated infant apparently full-term; large amount of dark colored blood; marked distension of the intestines, uterus markedly enlarged and presenting a rupture 5 in. long on the anterior surface.

In the discussion, Dr. Ireland stated that marked caution should be observed in pregnancy disclosing a history of previous cesarean sections, feeling that a reduction in the mortality of these types of cases would be brought about by more constant observation of the patient, and the institution of immediate intervention when required.

The Scientific Program was continued with a report of the Surgical Service by Dr. David B. Allman. The Surgical Service included August, September and October with a total number of 394 patients. His report follows: Keeping pace

with the continued growth of the hospital the last surgical service handled more patients than any previous service in the history of the institution. As seen by the statistics, nearly 400 patient came under our care during those 3 months, averaging over 4 patients a day. While it is true that many of the patients were only in a few days and suffering comparatively minor injuries, nevertheless, there were many admitted who were severely injured, and who were suffering from very serious surgical conditions. Considering these facts it is creditable to the institution that there were only 8 deaths on the Public Surgical Service, during these three months. The causes of death were: Ruptured liver, 2 cases; fracture of the ischium, with a terminal delirium tremens in hypertrophied prostate with senility; a depressed multiple fracture of the skull, and an incarcerated hernia in a man aged 81; crushed chest; and, a ruptured gastric ulcer.

One of the interesting coincidental features of the service was the presence in the wards at one time of 3 cases of fracture of the sacrum. I will venture to say that many of you have never seen a case, and that the vast majority have never seen 2 cases at once. It is also interesting to note that these fractures were received in comparatively minor accidents, a slip on the stairs, a fall from a ladder, and a minor automobile accident. Literature is scarce concerning this injury. Scudder does not even mention it, in his book. There is nothing in Ochsner's Surgical Diagnosis and Treatment. Just a few lines in Keen's System of Surgery, and the following from DaCosta's Modern Surgery: "The sacrum may be broken by direct force, such as a kick, but the injury is rare. The sacral plexus is usually injured, and if it is, paralysis is observed in the territory of its branches. The symptoms of fracture of the sacrum are pain, frequently incontinence of feces and retention of urine, irregularity of the sacral spines, ecchymosis, and crepitus. Crepitus may be sought for with one hand externally and a finger of the other hand in the rectum. The lower fragment passes forward and may obstruct or may tear the rectum. Paralysis may be found in the area of distribution of the sacral plexus.

Treatment: In any case of fracture of the sacrum, if there are evidences of pressure upon nerves by displaced bone, expose and elevate the depressed bone. If the rectum is, lacerated sutures must be inserted. In many cases of fracture of the sacrum the older conservative treatment is sufficient. Press the fragments into place with a hand externally and a finger in the rectum. Do not plug the rectum. Put a pad over the upper fragment, hold it by a plaster or a binder, place the patient recumbent on a fracture-bed, and insert a large cushion underneath the pad. Some surgeons give opium to induce constipation, and allow a fecal support to accumulate in the rectum. Use a clean catheter regularly, and guard against bed sores. Union occurs in about 4 weeks, when the dressing can be removed. The patient can get about again in 6 weeks. If urinary retention persists, or if intractable bed sores form after 8 or 10 weeks, cut down on the seat of injury and elevate or remove the portion of bone causing pressure."

An interesting feature of all 3 cases on our service is that none of them presented any of the above symptoms excepting pain and some tenderness, and it was only by means of x-rays that the lesion was discovered. In none of our cases were there any nerve involvements, and

recovery in all three is entirely complete, with the exception that one claims to have pain on prolonged standing.

These cases were discussed by Doctors Richard Bew, D. W. Scanlan, Robert Kilduffe, T. D. Taggart, W. C. Westcott and Theodore Senseman. Dr. Senseman, Surgical Chief, complimented Dr. Allman's service both on the magnitude of the work performed and upon displaying such splendid surgical judgment in the performance of duties.

Dr. Senseman related a case of pyloric stenosis. The Fredet-Rammstedt operation was a method of choice and the subsequent course was that of a complete cure with immediate cessation of the projectile vomiting which had been characteristic for a period commencing soon after birth. He stressed the importance of reducing the mortality of pyloric stenosis in early infancy by following a reasonable length of time on medical treatment and keeping in mind the physical condition of the baby as a criterion for surgical procedure.

Dr. J. H. Marcus complimented Dr. Senseman on the skillful and rapid performance of this delicate operation, stating that 2 hours following the operation the baby retained 2 drams of water and during the same day breast milk was given which the baby retained, and, 24 hours following the operation, owing to inability to obtain further breast milk, a formula preparation was given and retained. The medical treatment of this baby consisted of the administration of atropin sulphate 1/25 gr. daily, with Sauer's thickened gruel. After a week of medical treatment Dr. Marcus felt that surgical intervention was justifiable. He stressed the importance of drawing the line of demarcation between discontinuance of medical treatment and subsequent operation. This baby made a complete recovery with immediate cessation of vomiting after operation. Dr. D. B. Allman closed the discussion.

Upon proper motion the meeting was adjourned.

#### BERGEN COUNTY.

H. B. Wolowitz, M.D., Reporter.

The Bergen County Medical Society held its annual meeting on January 12, at the Hackensack Hospital. New officers were elected for the year—President: M. J. Sullivan. Vice-President: G. W. Finke. Secretary: T. L. Caldrony. Treasurer: M. Sarla. Reporter: H. B. Wolowitz.

The new permanent delegates elected to fill the vacancies caused by the resignation of Dr. Armstrong, and the death of Dr. McFadden, were G. H. Ward and F. Freeland.

The creation of the office of Historian of the Society was suggested by Dr. Bell and discussed, but not yet definitely acted upon, as it requires an amendment to the constitution. The purpose of this office will be to collect and file all data relative to the history of the society and the biography of each member.

In view of the recent death of one of our most highly esteemed members, Dr. G. Howard McFadden, the following tribute was presented by Dr. John E. Pratt:

#### Preface.

"One of Dr. McFadden's long time friends and admirers suggested to me that the improper way to treat the subject given to me would be from the historical approach; that the occasion and the theme demanded a—'dissertation-sermon' was the word he used—on the life and character and

personality, and the reaction of the people thereto. I had intended to present a brief biographic sketch for the sake of the record but that can easily be provided from other sources.

"It is true that cold and formal statistics are of little import at the moment when the emotions are stirred to their depths, when the wounds caused by the sudden rending of intimate personal relationships are still fresh. One is not moved so much by the date of a birth as by the fact that that birth presaged a career worthy of note; one is not so much concerned with the calendar years of a man's life as with the tremendous fact of that life itself. To live, to breathe, to think, to act is a tremendous fact, and if nature has endowed that life richly with essential qualities of mind and heart, these are the objective in one's pursuit of the fitting word.

"If a man's life has been well spent and his faculties judiciously employed; if his generosity has abated a tithe of human woe; if his genial light has dissipated the darkness in any human soul; if his impress on the world has been wholesome; if he has accomplished the flight of time allotted to him with healing in his wings, one does not seek as the important thing to know the day of his advent, the country of his origin, the escapades of his youth or the vicissitudes of his course.

"When the grief is still fresh, when the sense of loss lies heavy, the writer at least conceives his duty to be like that of the vestal virgins, to keep the altar fires burning, and he will leave the collation of biographic material to others.

"This by way of preface."

#### A TRIBUTE TO THE MEMORY OF DOCTOR MCFADDEN.

We stand in awe when the grim reaper with sickle keen enters the garden of our lives, we fold helpless hands and offer feeble and futile resistance the while he reaps where he will; we protest in vain that his estimates are not measured by human standards, while he flouts our judgments as to what flowers shall remain standing and what shall be gathered into the garner.

When he reaps the bearded grain, the flowers that have lived their way, completed their cycle and breathed their fragrance on the air till its fountain is exhausted, we say: This is inevitable; life in the natural world is thus, seed-time, fruit-bearing and harvest in their turn.

And while we may mourn with Tennyson: that

"The tender grace of a day that is dead,  
Will ever come back to me";

yet with the memory of the beauty that was, fresh in its fruitfulness, we "lift hands of prayer" and breathe a benediction of peace. Grief loses its poignancy in the presence of the great fact of a completed life that has borne its burdens, carried its sorrows, shared in the world's triumphs, added something to the uplift of the human race, and gone down, not in defeat, but with the song of conquest echoing back from the other shore.

But the reaper seems sometimes relentless. He thrusts in his sickle and cuts down the flower that is yet distilling perfume, the blossom still fresh with the dews of heaven on bud and leaf, giving to the world through human contact the rich endowment of its Creator.

"All that lives must die."

When an old man, who has borne his fruit, yielded his perfume, and whose prestige has become a common heritage, goes to join the cease-



less, endless procession we may say with Hood:

"When he is forsaken,  
Withered and shaken,  
What can an old man do but die?"

When the younger man whose eye is yet undimmed, whose natural force of character is unabated, who has wrought well and made for himself a place in the hearts of men, when such a man takes his place in the "innumerable caravan", the heart is stabbed with distracting grief and we stand perplexed in the presence of inexorable fate whose ruthless touch severs the ties that bind, distorts the natural course of events and closes in midyears a life that was generous in the common amenities.

Such a one we have lost in the passing of our late colleague and friend, Doctor McFadden, and it is fitting that this society pauses to give expression to the sense of loss we feel at what seems an untimely end. Shakespeare says:

"Give sorrow words; the grief that does not speak

Whispers the o'er-wrought heart and bids it break."

This proceeding, quite unusual in the history of this society, the chorus of praise we have heard that is almost a unison, the widespread and poignant sorrow so freely expressed when our friend "crossed the bar", the floral tribute at the funeral service, splendid in its volume and its beauty, the tears I have seen fill the eyes of his friends when his name is mentioned—all these have a meaning which the most casual may interpret. The meaning can be none other than that the good doctor, the good friend, the sympathizer had been enthroned in the hearts of the people and that this, their only libation was being freely poured out on the altar of memory.

One of our friend's richest and most precious endowments was his capacity for friendship. His cheerful disposition, his sympathy, his frankness attracted people of every class and condition and drew them, and the friends he made he was wont to "grapple to his soul with hoops of steel".

His open-heartedness brooked no concealment of any lesser fault he may have had. In his scorn of sham he wore his "heart on his sleeve".

Thus he drew human souls and their love was so constant that he never had need to utter the aphorism: "Defend me from friends".

His happy possession was as receiver and giver of what the poet calls

"Friendship! mysterious cement of the soul!  
Sweetener of life! and solder of society!"

Another characteristic was cheerfulness. Good cheer emanated from him as the aroma from the flower. He had the inestimable faculty of projecting at least a ray of light into the densest darkness, of transmuting his buoyancy into saving grace for his patients, and it is said that the despairing went from his presence with rekindled hope, mentally fortified against the encroachment of their malady. I was told at the hospital that his patients needed only to hear his voice and his cheery good morning to feel marked improvement.

This was a factor that contributed to his success as a physician. Nobody knew better than he the rôle played by the mind in shunting off from its track the train of despondency.

It is not surprising that Dr. McFadden was a successful practitioner. One of his friends said to me a few days ago that he was the busiest man he ever knew in his active days, and that patients who by reason of numbers could not find access to him would wait for days nursing their own ills till they could reach him.

He was conscious of his limitations and boasted no special skill. Self confidence was absent from his make-up and he was more inclined than most men to seek consultation with his fellows. One of his friends in the profession used these words in speaking out of a fond heart and intimate acquaintance: "He was a practitioner of the old school; he gave of himself, and a good deal like Osler his treatment was largely nux and hope",

His character had its foundation in good old Scotch Presbyterian, which, however narrow and provincial and exclusive it may have been, yet bred men of sterling worth. Men who were nurtured in that atmosphere, who imbibed that spirit, who were nourished on that pabulum became pillars of society, statesmen of principle, honest in business, wise fathers, upright citizens.

This heritage of our friend contributed to the making of a singularly attractive personality. He had an individuality all his own. There was in his personality a mixture of diverse elements in strange and yet harmonious blend. Wherever one met him the usual impression made was one of light-heartedness not unmingled with frivolity, but he carried the burden of his life work deep in his heart and the welfare of his patients had his serious thought. His face was by no means always an index to the thoughts that burned within.

His patients were not merely his patrons in a sordid commercial sense, as is too often the case; they were not alone his capital investment whence came his dividends. He became a part of their very lives where soul met soul in an interchange of the truest well-being; he made himself acquainted with their condition, their thoughts, their aspirations; his first and almost invariably successful effort was to engender hope and bring surcease not only from physical pain but from that mental dejection which is a common possession of the sick, and he knew that this did not depend entirely on an accurate diagnosis or a wise use of the materia medica. Supplementing these and who knows but greater and better than all else was the inspired faith. I am told that the trust in him became a most beautiful expression of personal devotion. Firm in his own convictions he was sweetly tolerant of others' views. He would never allow himself to be drawn into an argument which might eventuate in the least bitterness, contenting himself with a statement of his opinion and leaving the matter there without a hint of antagonism. In groups of people as in business or executive capacities he was singularly successful in amalgamating conflicting opinions to produce a resultant harmony.

If this meagre and inadequate tribute meets with your approval and you wish to adopt it as your own, we shall thus have put on record our sense of real loss in the passing of our professional colleague and our personal friend.

"Friends depart, and memory takes them

To her caverns, pure and deep," but we cry with the poet—

"But O, for the touch of a vanished hand  
And the sound of a voice that is still."

Dr. G. K. Dickinson of Jersey City was asked, at Dr. Bell's suggestion, to say a few words, the substance of which was:

"Mr. Chairman and Fellows—I am a self-invited guest tonight. When I heard that you were going to talk about my playmate, I had to come. I have known McFadden for a great many years, we ate together, we slept together, we worked together, and we played together. I have never known a more cheerful, a more even-tempered, a more kindly man. I am a sharp man, quick, and

to the point; and on the boat last summer, on our trip to Europe, whenever I became testy Mac just looked at me and laughed.

"Dr. Pratt said that Mac is dead, but he is not. No man dies until the last man who has shaken his hand and has heard his voice has passed on. And that will not be for a long time yet. Those of us who have heard his cheery 'Goodbye', in rising inflections, as he hung up on the telephone, will not soon forget it.

"The young man who is casting about for someone in whose footsteps to follow, and upon whom to look as an inspiration and a guide, may well pick Dr. McFadden."

The members of the society then stood in silence with heads bowed for one minute, as a mark of respect to the memory of Dr. McFadden.

#### **Ridgewood Medical Society.**

H. S. Willard, M.D., Secretary.

The last meeting of the society was held on January 20, and was largely attended by the members. It was one of the most interesting meetings the society has had in a long time. The subject for discussion was "The Prophylactic and Immunization Treatment for Scarlet Fever". There has been a mild epidemic of scarlet fever in Ridgewood during the past 2 months and a case of angioneurosis of the leg following a prophylactic injection of serum was reported in full, and there was considerable discussion by Dr. Morrow, of Bergen Pines Isolation Hospital, and other members of the society. This case, which had been seen by Dr. Zingher, of New York, and several other pathologists, presented some unusual complications of this form of treatment and opens up a large line of thought in regard to the susceptibility of some patients towards serum. This case being so very unusual will undoubtedly be written up technically and added to the literature on the subject.

The President of the local Board of Health was present at this meeting as a guest of the society, and spoke at considerable length on the desirability of the closest coöperation between Boards of Health and Medical fraternities.

The usual social hour followed the discussion of the scientific topics.

#### **BURLINGTON COUNTY.**

R. I. Downs, M.D., Reporter.

A regular meeting of the Burlington County Society was held on Wednesday, January 13, 1926, at 1 P. M., at the Woman's Guild of the Presbyterian Church in Mount Holly. Dr. R. I. Downs presiding. There were 25 present.

The minutes of the previous meeting were read and approved. The following applicants were voted on as members and elected:

Jacob M. Davis, M.D., Burlington; Russell D. Geary, M.D., Delanco; Henry Matez, M.D., Pemberton; G. E. McDonnell, M.D., Mount Holly; Paul B. Reisinger, M.D., Roebbing, and Parry M. Scott, M.D., Beverly.

Those present took the oath of membership and signed the constitution.

Dr. Darlington presented a letter of endorsement, which the society favored unanimously and a copy of the letter is below:

"To the Honorable Board of Chosen Freeholders of Burlington County, N. J.:

"Gentlemen—Should a vacancy occur on the Board of Managers of Fairview Sanatorium, the Burlington County Medical Society unanimously

recommends George T. Tracey, M.D., of Beverly, N. J., as a person qualified to fill such vacancy to the credit and satisfaction of your Board.

"Respectfully submitted,

"ROSCIUS I. DOWNS, Pres't."

The following resolution was then presented by Dr. Joseph Stokes:

Resolved: That it is the opinion of the Burlington County Medical Society that an entirely new hospital building, accommodating at least 100 beds, is now absolutely necessary to meet the medical needs of the county, and

Further Resolved, That we recommend to the Board of Managers of the Burlington County Hospital that they promptly take the necessary steps to secure funds for the erection of such a building.

Resolved Further, That this Burlington County Medical Society will give its most active and enthusiastic support to such a drive.

Dr. Longsdorf completely explained the situation. There was much discussion involving these points: first, the necessity; second, the place of erection, and third, a training school for nurses.

The resolution was passed unanimously.

Dr. Emma Weeks-Metzer outlined her plans in building a maternity home in Riverside. The hospital is now under construction and will be completed in a few weeks. All Burlington County physicians will be invited to attend the opening.

Dr. Remer announced that there was now a small private hospital for chronic cases at Vincenttown called Vincenttown Private Hospital. The news of this much needed institution was favorably received.

Dr. Metzer and Dr. Stokes were appointed to draw up a resolution on the death of Dr. George Herbert and to report at the next regular meeting.

The meeting was then turned over to Dr. Richard D. Anderson, chairman of Section of Practice of Medicine, who introduced the two speakers, Dr. Richard A. Kern and Dr. Charles A. Wolferth, both of Philadelphia.

The subject chosen by Dr. Wolferth was "The Recent Progress in the Therapy of Heart Disease". He classified it as the infectious type, common among young people, and the degenerative type where focal infection, strain of living and syphilis, are frequent factors. He discussed treatment for both.

Dr. Kern's subject was "Medical Management of Duodenal Ulcer, Its Indications and Technic". Among causes he gave focal infection, increased hydrochloric acid and pepsin, and explained the Sippy treatment in full.

All members were highly pleased with the interesting manner in which the practical and scientific medical information was presented, and felt well repaid for attending.

The meeting adjourned to meet in Burlington in April. A fine dinner was served by the Woman's Guild of the Presbyterian Church.

#### **CAMDEN COUNTY.**

**Camden County Medical Society.**

Henry B. Decker, M.D., Secretary.

The annual meeting of the Camden City Medical Society was held on January 5, 1926.

The report of the Historian was prepared and read in the usual humorous manner. The Treasurer reported a satisfactory balance remaining in the treasury; most members had been under the impression that the society was verging on bankruptcy, until this report.



The President, Dr. Thomas K. Lewis, delivered his address, the subject being "The Middle Aged Heart".

The officers elected for 1926 were—President: Beulah Hollinshed, Vice-President: W. B. Jennings, Treasurer: William H. Hart, Historian: W. J. Barrett, Secretary: Henry B. Decker.

### CUMBERLAND COUNTY.

E. S. Corson, M.D., Reporter.

Through the courtesy of Mr. Thorne, superintendent of the State's Home for Feeble-minded Women, the County Medical Society met in the assembly room of that institution. The orchestra entertained the physicians with a number of selections which were heartily appreciated.

Miss Bassett, of the psychology department, demonstrated the use of the Binet-Simon test for determining the intelligence of the pupils. During the early history of the human race the feeble-minded were eliminated from society by drowning, starving to death and throwing from precipices. Only beginning with the Christian era was any organized effort made to care for these unfortunate.

In England the pauper was hired out to mill owners and with each quota a certain number of feeble-minded were required to be taken. These were soon lost sight of and disposed of in various ways.

Etard, of Paris, was the first to study them to determine the cause and classify them for rehabilitation, the shape of the head, form of face and physique were tried out. They all failed, having no relation to mentality.

Intelligence testing depends upon a wide range of intelligence. Binet, the master psychologist, original, frank and open minded, was appointed on the Paris Commission in 1904. His system, as modified by Simon, consists of the use of objects, figures, colors, words and questions arranged according to standards. A test was made on one of the pupils and classification made at the close.

### In Public Schools.

An effort is being made to have this test applied in the public schools. This will be of great advantage in placing pupils where they belong in the beginning of their schooling and not after years of trial, in which many become the butt of ridicule for causes for which they are not responsible. The test as applied in Burlington County showed several such cases. Dr. Slattery, physician to the institution, showed the method of differentiation when examining pupils for the home as between idiocy, feeble-mindedness and insanity.

Comparing the past with the present, the care and treatment of this class of unfortunates shows clearly that the world is growing better. Money spent in maintaining such institutions is an economy, for such persons at large propagate undesirable, causing a menace to society. One family alone is responsible for 1200 criminals and degenerates.

Drs. J. Kurt Beeliner and Vincenzo Giacalone, of Vineland, were elected to membership.

After the meeting inspection of the dormitories was made and luncheon was served at the home of Mr. Thorne.

A hearty vote of thanks was extended to Mr. Thorne and the institution for the splendid entertainment.

### GLOUCESTER COUNTY.

Henry B. Diverty, M.D., Reporter.

The Gloucester County Medical Society was entertained by Dr. J. Harris Underwood at the regular monthly meeting, which was held in the newly renovated Nurses' Home connected with the hospital.

The physicians attending were Drs. Hollinshed, of Westville; Stout and Zapf, of Wenonah; Knight and Burkett, of Pitman; Duffield, of Glassboro; Buzby and Downs, of Swedesboro; Wood and Sinexon, of Paulsboro, and Underwood, Nelson, Sickel and Diverty, of Woodbury.

State Councilor Dr. W. P. Glendon, of Bridgeton, was present, as was also Dr. Lore, a delegate from the Bridgeton Society. There were also a few invited guests and they along with the nurses of the hospital enjoyed a profitable evening.

Dr. Gabriel Tucker, of the Jefferson Hospital, presented a number of slides and motion pictures on "Bronchoscopic and Esophagoscopy Cases of Medical and Surgical Interest".

After the lecture a delicious and substantial luncheon was served by Dr. Underwood's corps of nurses.

Altogether, it was an enjoyable evening and those who braved the inclement weather were well repaid.

### HUDSON COUNTY.

Martin Marshak, M. D., Reporter.

The Hudson County Medical Society met at the Jersey City Hospital, January 5, 1926, with Dr. J. F. Londrigan presiding.

On motion, the President appointed a committee to investigate the advisability of supporting a physician's telephone exchange under control of the society.

Dr. Morrison, Secretary of the State Society, was a guest and spoke on the question of increasing membership so as to include all eligible physicians in the county. He also spoke on the advantages of the State Society's Group Insurance Plan, and concerning the duties of the Executive Secretary, Dr. Reik, and the expenses of the State Society in its varied labors.

The President introduced Dr. O'Hanlon, Superintendent of the Jersey City Hospital, who has filed his application for membership in the society.

Hyperthyroidism was the subject on the program and was taken up in 2 sections; the medical aspect being presented by Dr. C. J. Tyson, of New York, and the surgical management by Dr. R. P. Sullivan, of New York.

Dr. Tyson presented his side of the subject in a concise paper full of potent facts. He said that hyperthyroidism is a symptom-complex, or syndrome, produced by auto-intoxication with thyroxin. There is no uniform pathology of the thyroid gland present in these cases. The colloid or adolescent goiters are usually quiescent and the symptoms present are due to pressure. The treatment therefore is prophylactic, careful use of iodine, and surgery to relieve pressure and for cosmetic effect. The differential diagnosis between toxic adenoma and exophthalmic goiter was presented as follows:

Toxic adenoma—30-40 years—Previous quiescent goiter; asymmetrical and nodular; cardiac involvement, severe; digitalis effect, poor; exophthalmus, rare; response to iodine, none; Basal metabolism, higher; cure following surgery.

Exophthalmic goiter—20-30 years—Sudden onset; contour, symmetrical; cardiac involvement, slight; digitalis effect, good; exophthalmus in 80%

of cases; response to iodine, good; Basal metabolism, lower; no cure following surgery.

In neurocirculatory asthenia the reaction to rest is immediate in hyperthyroidism. It is slow, and the loss of weight is marked, in hyperthyroidism. In the nervous case, this is not true. A pulse rate of 120 or over in a well-nourished individual is not indicative of hyperthyroidism. The hands of a neurotic are cold; in hyperthyroidism they are warm. In neurotics, there is a marked sensation of weakness with a tremor and tachycardia, which is rapidly diminished by rest. Pulsating thyroids are sometimes mistaken for aneurism.

The complication aside from pressure effects that is most frequently present is cardiac disease, especially myocardial degeneration. This produces tachycardia, followed by dilatation and at times hypertrophy. At times, all types of arrhythmias and even fibrillation may occur. As these changes tend to become permanent, the symptoms may persist even after operation. The pulse pressure is increased because the systolic pressure is elevated, but the diastolic pressure remains stationary.

The treatment consists of absolute rest, both physical and mental. This can rarely be obtained at home; therefore, these cases should be institutionalized. Bromids and somnificants are at times necessary. As to diet, a double calorific value is necessary to make up for the increased metabolism; protein should be sufficient to keep a nitrogen balance, about 1 gm. per kgm. of body weight. Fat, which has a tendency to waste iodine in its metabolism, should be used as sparingly as possible. The bulk of the calories must be made up in carbohydrates. According to Plummer's suggestion, iodine in the form of Lugol's Solution is the specific therapy for hyperthyroidism. The dose given is from 15 to 30 minims a day, which will produce a marked improvement in from 5 days to 2 weeks. A larger dose, or when given for a longer period, may produce alarming symptoms. Patients should, therefore, be closely guarded. In the adolescent type of goiter, iodine may produce hyperthyroidism, and in toxic adenoma it is of no value and may be dangerous.

Dr. R. P. Sullivan discussed the histology, physiology and pathology of the thyroid gland. He felt that Plummer's classification was the best. Plummer states that each type has a definite series of symptoms, which are due to the reaction of the organism to structural changes in the thyroid. Plummer's classification is as follows: (1) simple goiter of adolescence; (2) adenomatous goiter; (3) exophthalmic goiter; (4) carcinoma, tuberculosis and thyroiditis. The clinical symptoms due to exophthalmic goiter may be remittent with waves of varying intensity. As the progress of the disease becomes of longer duration, the prognosis becomes worse, due to permanent changes in the cardiac and skeletal muscles and other organs. In toxic adenoma, the onset is very gradual and long after the goiter is present. The course is mild, but progressive, with remittences rare.

In toxic goiter, surgery is the principal mode of attack, but preliminary measures are absolutely essential. Dr. Sullivan described the operations which he said are well-standardized, the deciding influence being complete hemostasis, careful dissection to avoid injury to the inferior laryngeal nerves, and proper team work. The effects of injury to the inferior laryngeal nerves are loss of voice and progressive dyspnea. The use of iodine in proper cases has eliminated ligation and other

preliminary operations. He stressed the danger of the promiscuous use of iodine, and stated that it was useless in toxic adenoma. After operation, special attention should be given to reconstruction of the patient, diet being especially important.

He concluded as follows: (1) Hyperthyroidism is constitutional disturbance resulting from exophthalmic goiter or hyperfunctional adenoma. (2) Proper treatment is dependant on proper diagnosis. (3) Surgery has so far produced the best results. (4) Iodine is useful in the pre-operative preparation of exophthalmic goiter cases, but, definitely harmful in those with toxic adenoma. (5) Operation is not devoid of possible serious features.

Drs. Miner, Jaffin, Dickinson, Marshak, Axford and Louis Schwartz took part in the discussion, which was closed by Drs. Tyson and Sullivan.

#### MERCER COUNTY.

A. Dunbar Hutchinson, M.D., Reporter.

The Mercer County Medical Society held a regular meeting on January 13, in the Carteret Club, about 45 members being able to break away from the rush of work that has fallen upon us at this time.

President Comfort called upon the Treasurer for a report, and the members were extremely gratified to hear that official announce 100% collections of dues for the year 1926.

The application of W. M. Stratton, M.D., of Trenton, was read and referred to the Membership Committee.

Dr. Victor Klauder, assistant professor of Syphilology on the Postgraduate School of the University of Pennsylvania, was introduced by the president, and with the aid of excellent lantern slides gave a very interesting and instructive discourse on the subject of "Cutaneous Manifestations of Syphilis, with Reference to Differential Diagnosis". Dr. Klauder emphasized the importance of early and complete diagnosis, with the extreme limit of treatment instituted at once and thoroughly carried out. He took great pains to point out the many important signs in the different stages of this disease, with the distinguishing features that differentiate it from many of the benign skin lesions that come before the general practitioner.

Following a very interesting discussion, with luncheon served, a vote of thanks was tendered Dr. Klauder for the instructive address.

#### MIDDLESEX COUNTY.

John H. Rowland, M.D., Reporter.

The quarterly meeting of the Middlesex Medical Society was held on December 16, 1925, at Hotel Pines, New Brunswick.

The following officers were elected: President: J. P. Schureman, New Brunswick. Vice-president: Frank C. Henry, Jr., Perth Amboy. Treasurer: Frank C. Johnson, New Brunswick. Secretary: John H. Rowland, New Brunswick. Delegates to State Society: F. L. Brown, New Brunswick; I. T. Spencer, Woodbridge; G. W. Fitian, Perth Amboy. Alternates: J. F. McGovern, New Brunswick; M. S. Meissner, Perth Amboy; C. A. Hofer, Metuchen.

Following the election of officers a very instructive talk was given on Gastro-Intestinal Neuroses, by Dr. H. H. Fellows, of Cornell Clinic.

This was followed by a wonderful dinner and entertainment.



**MORRIS COUNTY.**

Marcus A. Curry, M.D., Reporter.

A special meeting of the Morris County Medical Society was held on Tuesday evening, January 19, at the Community Club House in Morristown, to listen to a talk on the subject of Birth Control, by Dr. James F. Cooper, director of the Clinical Research Department of the American Birth Control League.

President Glazebrook presided over a gathering of approximately 100, composed of members of the society, local clergymen, State Senator Abell and Assemblyman Barrett of Morris County and other guests of the society.

Opening the meeting, President Glazebrook said: This special meeting of the Morris County Medical Society has been called to listen to a discussion on a subject which is of some interest nationally and internationally; I may say, of great interest just now. The Morris County Medical Society is in no way connected with this movement; I wish that to be understood. We were asked to allow the speaker to come and address us. It has been the custom of other medical societies through the country to permit this; and as this is a subject which is of considerable interest to medical men, we were very glad to take advantage of this opportunity to have this subject presented. We shall be very glad to hear what the speaker of the evening has to say and when he has finished he will be glad to have anyone ask any questions.

Dr. Cooper being introduced prefaced his address by saying: It is my custom at these times to address myself particularly to the medical profession. I am somewhat surprised to find a number of lay people here tonight, because I had intended to devote my remarks entirely to members of the profession and tell them what has been done in the scientific research department of our league, in evaluating present methods of contraception technic and in regard to the results we have obtained in undertaking studies in some newer method so that the physician may avail himself of this method to use in those cases where he has occasion to apply it; however, such a discussion is out of place entirely before a lay audience and it is the policy of our league not to disseminate and not to speak of birth control in any broadcast manner or deal in the personal side of the matter.

Restricting himself to the more general aspects of the subject, Dr. Cooper gave a very elaborate and interesting talk which encompassed much detail and many statistics in elucidation of the basic factors of the aims and purposes advocated by the American Birth Control League; including prospective over population of the earth in general and the United States in particular, and the biologic, sociologic, economic and other sides of the subject.

Those taking part in the discussion and propounding questions that were freely answered by Dr. Cooper, were Drs. Curry, Flagge, Julia Mutchler, Lathrope; and Senator Abell and Assemblyman Barrett.

**PASSAIC COUNTY.**

Donald B. Low, M.D., Reporter.

The January meeting of the Passaic County Medical Society was held at the Health Center Building, Paterson, on Thursday evening, January 10, with 41 members and 3 guests present. Dr. Charles R. Mitchell presided. The regular order of business was dispensed with and the scientific paper taken up first.

Dr. Norman E. Titus, of New York City, read a paper on "Physiotherapy in Hospital Team-work". He related that many hospitals were taking up this work as were many of the medical schools, he himself lecturing at Columbia University College of Physicians and Surgeons. He said: "Physiotherapy is composed 95% of common sense as to the pathologic physiology of the case in hand; 3% technic of giving treatment; and 2% of knowing what it can and cannot do when applied". Dr. Titus took up the different branches of physiotherapy such as heliotherapy mechanotherapy, electrotherapy and hydrotherapy.

The paper brought forth a good discussion and many interesting points were brought out. Dr. Titus was very broadminded in all his statements and did not speak of the miracles of physiotherapy we so often hear of.

A motion was made and passed that this society hold an annual dinner sometime in May and this dinner be called the Dean's Dinner.

Dr. Marsh reported, as head of the Committee on Ventilation of Schools, that a specified law as to the type of ventilating system to be used in the schools was made and that the local society would have to appeal to the State Society for aid in this matter of ventilating our local schools.

Dr. Hagen made an appeal for all medical men to join the American Legion, stating that there were but 12 physicians in the legion in Paterson.

**UNION COUNTY.**

Russell A. Shirrefs, M.D., Reporter.

The regular meeting of the Union County Society was held at the Elizabeth General Hospital on the evening of January 13 and was largely attended. In addition to the usual business routine, the following memorial resolutions on the death of Dr. J. Ackerman Coles were read, adopted and ordered spread on the minutes:

**Resolutions on the Death of Dr. Coles.**

In the death of Dr. J. Ackerman Coles, the Union County Medical Society has lost its oldest member.

Doctor Coles inherited from his illustrious father, Dr. Abraham Coles, a love of art which led him to make a valuable collection of paintings and statuary, many of which he gave, during life time, to various institutes through the state and country.

He was never married but he cared lovingly for numerous orphans in homes which he maintained throughout Union County.

He was devoted to his sister during the many years of her illness and led a quiet cloistered life for the past 40 years.

In his passing there has gone a scholarly man, whose deeds will live after him.

E. W. Hedges,  
J. B. Harrison.

It was decided to order 50 of the official A. M. A. automobile insignias bearing the name of the Union County Society, provided that a sufficient number of members subscribed therefor. There were 8 proposals for membership, which were referred to the committee for action at the next meeting.

Dr. H. O. Reik, Editor of the State Journal, gave an interesting talk on the work that our State Society is doing and stressed the importance of and growing public demand for periodic health examinations. The technic of the latter was exemplified on a "patient" by Dr. H. R. Livengood, and a general discussion followed. Dr. George S. Laird, of Westfield, presided. After the meeting a collation was enjoyed.

## WARREN COUNTY.

F. A. Shimer, M.D., Reporter.

The Warren County Medical Society having adopted the plan of holding meetings quarterly, convened for the first of these periodic sessions at Washington, N. J., on January 12 at 10:30 A.M.

How to produce a healthier county with less deaths, less loss of school hours, less loss of wage earnings was the Golden Rule message to our citizens. The sanitary laws and their better enforcement, even upon the M. D.'s themselves was the keynote of a meeting which marked an epoch in this section, all interested bodies being guests.

Dr. H. B. Costill, Director of the State Board of Health, showed that the cost per person in Warren County for Board of Health work was only five cents, whereas in carefully regulated cities it amounts to seventy cents and even one dollar. He clearly showed that health officers of local boards could not at the small salary paid, follow the state law in visiting each house where disease was reported and serve a written notice on the family, decide how the patient was to be isolated, notify the school, test the children of school age in throat cases, regulate the families' relation to the milk dealer, laundry, library, factory, etc., and issue orders which of the family not in contract with the contagion could go in and out, and then at the close of the disease, issue written health certificates, lifting the quarantine.

Clifford Losey, the local inspector receives \$150.00 per year. Phillipsburg with 20,000 population allows \$300.00 for health and \$300.00 for expenses. Rural townships frequently pay the assessor nothing.

The Medical Society voted to go on record asking governing bodies in the county to give more money to Boards of Health, in both towns and townships, so a better health officer could be secured, or to finance the present officer, if efficient, so he could do better work.

D. C. Bowen, the veteran chief of administration of local boards of health, said officers were not giving written or printed instructions at the home where contagion existed; that Boards of Health were not reporting all the reportable kinds of contagious disease; not requiring the reporting and placarding of measles; not requiring the reporting of early cases of tuberculosis, so that non-medical persons, by efficient organizations, could help teach the families how to live and how not to infect young children; how typhoid could be avoided by whole communities by immunization; how diphtheria can be abolished in schools by the Board of Education and the Board of Health putting on a campaign of the Schick test and immune doses to those susceptible; how small-pox is best held in check by Boards of Education forbidding children to enter school unless vaccinated, as the constitution prevents the State Board of Health from ordering everybody vaccinated; that doctors are not reporting, not only measles and chickenpox, but all their diphtheria and scarlet fever cases.

The society voted to endorse supplying towns and townships with better trained, efficient, well-paid health officers, and proposed pushing the propaganda through speakers at women's clubs, men's church clubs, granges, and all available organizations.

Miss Boyer, representative of the Child Hygiene Bureau, spoke on the law requiring license where nonresident children were boarded; the baby clinic, with its care over prenatal condition of mothers, and their babies; the school nurse to do follow-up work in the home where the school medical inspector sends cards.

## Book Reviews.

*All books received will be mentioned by title with the names of their authors, publishers, etc., and this will be considered by the committee as sufficient acknowledgment to the publishers. Selections will be made for review as the merits of the books or the interests of our subscribers may warrant.*

**Proceedings of the International Conference on Health Problems in Tropical America**, held at Kingston, Jamaica, B. W. I., July, 1924, by the Medical Department, United Fruit Co. Published by United Fruit Company, Boston, Mass.

The origin and general plan of this conference is well described in a foreword by Professor M. J. Rosenau, of Harvard Medical School, who was one of the delegates.

It is not a long time looking backward when Tropical Diseases were looked upon by the average physician of the Northern United States as curious and interesting cases of disease, rather than a serious condition demanding close study and energetic opposition. However, the ever increasing tide of travel towards the lower latitudes and the necessity of caring for this heghra by business methods, with the developments of vast structures, such as the Panama Canal, aided also by the vicissitudes of war, have compelled a modification of this indifference and today tropical medicine is an important department for the medical student.

Our own West Indies have provided a magnificent field for investigation. Starting with the banning of Yellow Fever and the clearing up of the Isthmus, the sanitary worker has toiled in all parts of this beautiful island realm and among those assisting such projects the United Fruit Company has been pre-eminent for its generosity and the wisdom and success of its efforts to make the tropics livable for the white man. Whether or no the people of the temperate zone will ever become safely acclimatized to tropic residence is still an open question, but there can be no question but that the vast areas of these regions have been rendered habitable, enjoyable and productive by such sanitary work as this company has fostered. It was in the development of its purpose to improve the practice of medicine, both curative and preventive, that the Fruit Company arranged this conference for its own workers with other notable investigators of tropic diseases to be held at Kingston, Jamaica, and no more delightful place for study could have been found than the Myrtle Bank Hotel, on the harbor shore of that city, as the reviewer knows from his own experience.

Here was presented a wonderful collection of essays and demonstrations of tropical diseases, and the best modern ways of combating them. It is hard with such a wealth of material to select any particular production, but the resumés of Dr. George E. Vincent, Dr. John L. Todd and Dr. A. E. Horn are admirable and afforded an excellent view of the great work developed and successfully carried on by this company. Here, are narrated, not merely the rendering possible, tropical living by the white man, but the methods which improve the conditions of the dark skinned native of the lands, and so notably increase their efficiency and working value.

Professor M. J. Rosenau's paper on the Seasonal Prevalence of Disease is also most interesting and valuable.

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## SCARLET FEVER, ITS PREVENTION AND CURE.

Illustrated with Lantern Slides.

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(Address before a Special Joint Meeting of the Bergen County Medical Society and the Rockland County Medical Society, held at Pearl River, N.Y.)

It is a pleasure for me to be here and have a little heart to heart talk with you on scarlet fever. Eleven years ago when we began the diphtheria work, Dr. Park and I had a vision that the time would come when diphtheria would be a thing of the past. This vision we are confident will sooner or later be realized. If every physician were faithful and conscientious in immunizing his own children and those of his patients the fear of diphtheria would soon disappear. While it is too soon to say the same thing about scarlet fever, yet we have a tremendous forward step in the control of this disease also. We have gained knowledge of the cause of scarlet fever and have now available methods that promise much in the way of production of immunity and prevention and control of this disease.

I have been impressed with some of the earlier work of various observers in Austria, England and Russia. In 1885 Kline found hemolytic streptococci in cases of scarlet fever during a milk-borne epidemic. The work of Moser carried out from 1900 to 1903 with a special antistreptococcic serum was productive of very good therapeutic re-

sults in toxic scarlet fever. He, Escherich, von Pirquet and Schick reported cases in which the injection of Moser's serum exerted a striking effect on the clinical course of the disease. There followed within 12 to 24 hours a marked drop in temperature, a blanching of the rash and an improvement in the character of the pulse and respiration, resulting in a decidedly beneficial influence on the general condition of the patient. The clinical results in scarlet fever from the use of different antitoxic sera recently reported in New Haven, Chicago, New York and other places were quite similar to the observations of the older clinicians made over 22 years ago.

Savchenko, a Russian laboratory worker, produced an antitoxic and antibacterial serum, and in coöperation with his clinical associates used it in a number of toxic cases of scarlet fever. The method of preparation and the clinical results were reported in the Russian Medical Journal, the Russki Vrach, in 1905. Savchenko definitely and clearly stated that the scarlatinal streptococcus produced a toxin, and that this toxin injected into horses gave rise to antitoxic antibodies analogous to the diphtheria antitoxin. He subsequently injected the antitoxic horses with streptococcus vaccines so as to produce in addition antibacterial antibodies. His aim was to obtain a combined antitoxic and antibacterial serum against scarlet fever. Moser produced his serum by injecting horses with living broth cultures of different strains of the scarlatinal streptococcus, which had been recently isolated from fatal cases of scarlet fever.

Active immunization against scarlet fever was developed by Gabritschewsky and his associates in Russia, who used a toxic broth culture of the scarlatinal streptococcus containing 3% by volume of the bacterial substance. With this toxin-vaccine they injected over 50,000 persons and the results of their work reported in Russian and German medical journals, leave no doubt that they have succeeded in producing an effective antitoxic and a temporary antibacterial immunity. By means of this toxin-vaccine they were enabled to eradicate outbreaks of scarlet fever in different schools, institutions and villages. Moreover, Gabritschewsky definitely states, in an article published in the Berliner Klinische Wochenschrift in 1907 and entitled "*Streptococcus Erythemas and Their Relation to Scarlet Fever*", that *toxins are produced by the scarlatinal hemolytic streptococcus and that the clinical disease is caused by the specific streptococcus of scarlet fever*. He writes that he and his associates had seen after injections of the toxin-vaccine symptoms quite similar to those observed in true scarlet fever. These characteristic symptoms were the scarlatinal rash, the strawberry tongue, fever, nausea and vomiting. Gabritschewsky also definitely claimed that the scarlatinal streptococcus was the specific cause of scarlet fever. This definite and clear cut assertion was made by Gabritschewsky because he and his associates injected human beings for the first time with the scarlatinal streptococcus and its toxic products. Man, as we fully realize today, is apparently the only animal susceptible to the specific action of the scarlatinal toxin. Gabritschewsky stated that the rash, sore throat, fever and vomiting were seen in fully 15 to 20% of those injected with his scarlatinal toxin-vaccine. He died in 1907, but his work was continued by his associates. In 1913 the Dicks began their studies. Their recent descriptions of a toxin produced by the scarlatinal streptococcus, and of an antitoxic serum obtained by injecting the toxin into horses, represent a continuation of the work of the Austrian and Russian observers.

The Dicks have tried to find the organisms in blood cultures from patients with

scarlet fever, but it has been impossible to find any organisms present constantly enough to indicate that they bear a constant relation to scarlet fever. In order to show that the specific organism of scarlet fever is not, as a rule, present in the blood stream, volunteers were inoculated subcutaneously with fresh blood serum and fresh whole blood from cases of scarlet fever, but the results were always negative. Volunteers were also inoculated in the throat and subcutaneously with filtered throat mucus from early cases of scarlet fever and the results here were also negative. The swabbing with a pure culture of the scarlatinal streptococcus of the tonsils and pharynx of 2 susceptible volunteers produced typical scarlet fever, and it was found that a filtrate of these cultures produced a skin reaction similar to that of diphtheria toxin on susceptible persons. With the knowledge of the Schick reaction in mind it was not difficult to make rapid progress with this new work. The outstanding discovery of the Dicks was: (a) that it is possible to produce experimental scarlet fever in human beings by means of the specific scarlatinal streptococcus, and (b) their application of the knowledge of the Schick test in the elaboration of a clinical test for the determination of susceptibility and immunity to scarlet fever. Suggestions for the human experiment are contained in the articles by Moser and Gabritschewsky.

Leaving the work done by the earlier investigators 20 to 25 years ago, let us come to the Dick test which was described in the J. A. M. A. in January, 1924. In this article the Dicks reported a limited series of observations in which they had used this test. This work showed that human beings from the standpoint of immunity to scarlet fever belong to 2 groups—the susceptible and the nonsusceptible. In applying the test to those convalescent from scarlet fever it was found that they reacted negatively. It is interesting to note in this connection that Gabritschewsky and his associates never saw a constitutional reaction associated with rash when they injected convalescents from scarlet fever even with larger doses of the toxin-vaccine. In their attempt to produce



active immunity in susceptible persons, the Dicks obtained constitutional reactions with large doses of the toxin similar to those reported by Gabritschewsky. In the first case thus treated there was a chill, high fever, vomiting and a scarlatiniform rash. Because of these severe reactions and the limited observations reported by the Dicks, it took a great deal of courage to start with the work of attempting to immunize susceptible persons. This we did in March, 1924. In order to avoid these constitutional reactions as far as possible, we began with very small doses. We gave 5 skin test doses at first, and with this initial injection there was no suggestion of a reaction. We took the skin test dose as the unit of measurement of the toxin for active immunization, and suggested that this unit be taken as the standard upon which dosage could be conveniently based. The skin test dose is 0.1 c.c. of that dilution of the toxin which will give a definite ++ positive skin reaction in susceptible young individuals and negative reactions in patients convalescent from scarlet fever. The Dicks have stated that we gave doses of toxin that were too small, but we did this purposely at first because we did not wish to run the risk of having severe constitutional reactions. Our work with the Schick test had taught us that if we desire to make such a test and immunization generally applicable, severe reactions must be avoided. In our attempt to produce immunity to scarlet fever we at first gave 3 doses of 100, 250 and 500 skin test doses. I began the work by immunizing my own children, 5½, 3 and 2 years of age. The injections were given 16 months ago and the children are still immune. With increasing experience we have gained confidence and increased the doses of the toxin. For the past 10 months we have injected larger amounts and our immunity results have been much better. We have increased the immunizing dose and changed our method of giving the toxin by injecting 4 doses at weekly intervals, i.e., 250, 1000, 2000 and 4000 skin test doses.

It is not necessary to describe the method of making the Dick test, as the technic is

exactly the same as for the Schick test, i.e., the injection of 0.1 to 0.2 c.c. of a dilution of a standardized toxin. This dilution may vary from 1:1000 to 1:10,000 or even greater, depending upon the strength of the toxin as determined by comparing it in skin tests with a standard toxin. It is advisable that a small 26 gauge ¼-inch needle and a good 1 c.c. record syringe be used. A control test with toxin boiled in a water bath for 2 hours should also be made. The test with the unheated toxin is made intradermally on the right forearm, the control with heated toxin on the left forearm, or both tests may be made on the same forearm. The Dicks failed to describe the pseudo-reaction which is present, but less frequently and less pronounced than the pseudo-reaction in the Schick test. It is to enable us to identify the pseudo-reaction that the control test is made.

A control consisting of toxin neutralized with antitoxic serum from convalescents or negative Dick reactors, or from immunized horses has one disadvantage. The antitoxin added to the toxin neutralizes the soluble toxin, but when the mixture of toxin and antitoxin is injected for purposes of control dissociation frequently takes place after 48 hours and a positive reaction is likely to appear in the control also.

There are 4 different reactions that can be distinguished with the Dick test, and these correspond closely to the similar 4 reactions noted with the Schick test. There is a positive, a negative, a negative-pseudo and a positive-combined reaction. The positive reaction closely resembles at the end of 12 to 24 hours a positive Schick test, which has reached its maximum at the end of the third or fourth day. The Dick test appears within 4 to 6 hours and fades rapidly after 48 hours. The control is therefore even more important in the Dick than in the Schick test. The positive reactions are read as strongly positive (++), when there is marked redness and local induration; positive (+), when there is redness with little or no induration; moderately positive (⊕), or slightly positive (⊕), depending upon the size and degree of redness in the reaction. The negative reaction shows no

local effect at the site of the test or of the control.

The negative pseudo-reactions are caused by the autolyzed bacterial substance of the streptococcus, and by other proteins contained in the test fluid. The reactions at the sites of the test and of the control are similar in size and appearance.

The positive-combined reaction shows a much more pronounced redness at the site of the test than of the control. In some individuals who give a strongly positive reaction with the usual dilution of toxin, the control with heated toxin will show a faint reaction. It is possible that the slight redness is a toxic reaction due to a trace of toxin that has escaped the action of heat and manifests its presence in those who are very susceptible to its local effects.

What gives us confidence that a negative reaction indicates clinical immunity to the toxic phase of scarlet fever? We have noted that among 27 children who developed scarlet fever subsequent to the Dick test all had given a positive reaction and all showed a negative reaction during convalescence from the disease. With the exception of 2 doubtful cases we have not seen any definite negative Dick reactors develop scarlet fever.

The presence of antitoxin in the blood serum of immune persons can be tested for in 2 ways: (1) By injecting 0.5 c.c. to 1.0 c.c. of the serum intradermally into the rash of an early case of scarlet fever and obtaining what is known as the blanching phenomenon of Schultz-Charlton. Within 6 to 12 hours the rash blanches out over an area varying in size from a 25 cent piece to that of a silver dollar. Within this zone the raised points of the eruption disappear, the skin becomes smooth and there is no subsequent desquamation. (2) The serum can be added to a dilution of toxin double the strength used in the Dick test in order to determine whether it neutralizes the toxin. This is shown by injecting the mixture intradermally into the forearm or arm of a positive Dick reactor and noting that it has no local effect. The neutralization of the toxin by antitoxin antibodies present in the blood was also shown by Gabritschewsky

and his associates, who found that convalescents from scarlet fever had no constitutional reactions after the injection of the toxin-vaccine, and by Savchenko who noted that the horse previously injected with the scarlatinal toxin for the production of an antitoxin serum had no local swelling and redness at the sites of subsequent injections of the toxin. These observations show that what we believe to be new discoveries may have antecedents that have been overlooked.

By making the Dick test with lower dilutions of toxin, we can determine the approximate amount of antitoxin antibodies present in the blood of convalescents and of normal persons. This direct method of estimating the antitoxin content allows of its rapid determination in many individuals and thus helps in the solution of various problems, such as the curve of antitoxin production after mild, moderate or severe cases of the disease, a comparison in the antitoxin content of convalescents and of normal negative Dick reactors, the direct quantitative estimation of the antitoxin after active immunization with scarlet fever toxin, etc.

Another interesting point we found is that the scarlatinal toxin can be neutralized by the antitoxin in multiple proportions. This observation places the toxin in line with the other soluble exotoxins, such as diphtheria and tetanus toxins. The knowledge of this fact is a distinct help in various phases of scarlet fever work.

It is well known that the streptococcus, like the other pathogenic cocci, does not produce a permanent immunity. The constant association of hemolytic streptococci with scarlet fever indicated that some etiologic relation exists, but the permanent immunity after scarlet fever made it difficult until the present time to claim that the streptococcus is the cause of the disease. That question has been a factor that has puzzled many investigators in the etiology of scarlet fever. Now we realize, however, that there are 2 phases in scarlet fever, the toxic and the bacterial. The hemolytic streptococcus enters the throat, multiplies and produces a toxin; the toxin is absorbed



into the system and gives rise to the toxic phase—the rash, fever, vomiting, kidney complications, etc. An interesting fact in connection with the bacterial phase of the disease is that a person convalescing from scarlet fever, who is no longer susceptible to the toxin, may yet develop complications due to the scarlatinal streptococcus itself, such as involvement of the ears, mastoid, suppurative glands, etc. What then does the permanent immunity to scarlet fever consist of? *This immunity is antitoxic and protects against the toxin and not against the streptococcus itself.* The streptococcus can still cause secondary complications, even in the presence of an active immunity. It is probable, however, that if the individual is susceptible to the toxin of the streptococcus, the latter helps the infection by paving the way for the secondary systemic invasion by this organism. By producing an active antitoxic immunity according to the methods described by Gabritschewsky and the Dicks, we are also to a certain extent protecting the individuals against the organism itself, and, after all, a clinical attack of scarlet fever accomplishes no more.

The dilutions of the scarlatinal toxin for the Dick test are quite stable, much more so than dilutions of diphtheria toxin for the Schick test, so that commercial houses can send out the diluted toxin in a form ready for use. They are not obliged to place on the market the toxin in a concentrated form, as is necessary with the diphtheria toxin. The dilutions of scarlet fever toxin for the Dick test will keep for months. When one recalls that it requires boiling for 2 hours to destroy the toxin this marked stability is easily understood.

### Results.

It has recently been claimed that the active immunity produced by the scarlatinal toxin is of only short duration. Our experience leads us to believe that the immunity produced by the scarlet fever toxin is just as active and will probably be as permanent as that produced by the diphtheria toxin. Furthermore, if the active antitoxin immunity is lost, it can be easily reestablished. The character of the

immunity conferred by the scarlet fever toxin may differ considerably from that produced by the diphtheria toxin, for one antitoxic immunity is not necessarily the same as another. A person once actively immunized against either diphtheria or scarlet fever does not return to the original degree of susceptibility. The permanency of the active antitoxic immunity to scarlet fever probably depends upon subsequent contact exposure and repeated infection with the specific streptococcus. The following observations lead me to this conclusion.

In testing for susceptibility to scarlet fever, we found about the same proportion of susceptible individuals in the different age groups as were found with the Schick test in determining susceptibility to diphtheria. In the various social groups also, we found the same differences in the percentages of positive and negative reactions we had seen with the Schick test. In certain groups in private schools from 85 to 90% reacted positively to scarlet fever toxin as well as to the diphtheria toxin, and in private practice an even greater per cent. of the children gave positive reactions to the 2 tests. Among the poor, on the other hand, a higher proportion was found to be immune to the 2 diseases, probably because of the repeated slight contact exposure to infections with these organisms as a result of overcrowding. This is true at least for a city like New York.

Various observers still express doubt that the streptococcus is the causative agent of scarlet fever. Are we correct in our conception of the cause of scarlet fever and immunity to it, or are we entirely mistaken? If we are correct, how can it be proved that the scarlatinal streptococcus is the true causative agent of scarlet fever?

Of decided importance in establishing this organism as the causative agent of the disease was the production by the Dicks of clinical scarlet fever in susceptible volunteers. The Dick reaction, moreover, has furnished additional proof by showing that susceptibility to scarlet fever can be indicated by a toxic filtrate of the scarlatinal streptococcus, as seen in the positive reaction. A number of strongly positive reactors were seen by us to develop scarlet fever. These persons subsequently

showed a negative reaction during convalescence. Also, nearly all patients with clinical scarlet fever show slight or moderately positive Dick reactions during the first day or two of the disease and negative reactions after a week or 10 days,—all these observations helping to prove that there is a definite relationship between the scarlatinal hemolytic streptococcus and the etiology of scarlet fever.

Multiple Dick test doses can be used to show *directly* on the patient how much toxic immunity has developed from time to time during the course of the disease. In order to determine *indirectly* the amount of antitoxic antibodies in a serum, tests can be made in a susceptible individual with various dilutions of the serum plus toxin to see what final dilution of serum is ineffective in preventing the appearance of a positive skin reaction. By means of the skin test the standardization of antitoxic sera can be carried out in susceptible individuals. To standardize the antibody content of an antitoxic serum we add double the standard strength of toxin used for the Dick test in equal amounts to increasing dilutions of serum. Where the strength of the serum is unknown, a preliminary test is made with 1:10, 1:50 and 1:100 dilutions of serum. The appearance of a negative Dick reaction with a lower, and of a positive reaction with a higher, dilution would indicate that intermediate tests can be made to arrive at a more accurate estimation of the antitoxic content. The Dicks have recommended using 10 times instead of twice the strength of the standard toxin for this purpose.

The scarlatinal toxin has to be standardized, for the present at least, on human beings. Guinea-pigs, mice and rabbits are not susceptible to the specific effects of the toxin. Different observers have claimed that goats and young pigs can be used for this purpose, but others have denied this. As our own toxic standard for the test is twice as strong as that of the Dicks, it should be remembered that the amounts of toxin we have injected for active immunization during the past 10 months have been considerably larger than those recommended by the Dicks. This in spite of the fact that these authors have recently claimed that we used entirely insufficient amounts of toxin. We now administer 4 doses of toxin

subcutaneously. It is interesting to note that with the first dose from 5 to 8% of the children developed a slight temperature, a scarlatinal flush of the skin, and sore throat. Only rarely did these symptoms appear with the subsequent injections of the toxin. In fact we injected with the second dose, 6 to 7 days later, 4 times as much toxin as with the first injection, and the children scarcely manifested any reaction, thus showing how quickly scarlatinal antitoxic antibodies developed. The fact that antibodies are developed so rapidly is an advantage in epidemics of scarlet fever and during the regular seasonal prevalence of this disease, as it enable us to establish a certain degree of tolerance to the toxin within 2 weeks. Under certain conditions, where immediate protection is desired, it is probably of advantage to confer passive immunization with antitoxic serum. The short protection obtained by it and the resulting sensitization to horse serum indicate that it is better to use the toxin rather than the antitoxic serum for purposes of immunization. The two can probably be combined; i. e., a dose of the antitoxin is given and at the same time the first dose of toxin is injected in the opposite arm. We can thus obtain immediate passive protection and at the same time commence the more permanent active form of immunization. My routine procedure is to inject a child exposed to scarlet fever with the first dose of toxin, except under unusual conditions when a dose of antitoxic serum is injected. The amount of toxin is then gradually increased, caution being observed however not to go too rapidly to very large doses, i. e., from 250 S. T. D. to 2000 S. T. D. Such a rapid increase is likely to be followed in about 10% by rather severe constitutional reactions, characterized by intense nausea, vomiting and prostration. These symptoms appear in addition to the other symptoms that occasionally occur even after the first small dose, such as fever, scarlet-like rash and sore throat. Severe reactions are likely to make people timid and ultimately interfere with the general application of the Dick test and immunization with the toxin.

The slides I am going to show will bring out some of our findings. They will bring out the fact that we can more readily produce an antitoxic immunity in those who show slight (+)



or moderate (+) positive reactions, than in those with marked (++) positive reactions. Thus we obtained a negative Dick retest after toxin injections in 90% of children with a + positive reaction and in 70% among those with a ++ positive reaction. An additional 26% of this second group had a slightly positive reaction at the retest, indicating that these children had developed a certain amount of antitoxic immunity, but not sufficient to inhibit the Dick reaction. Statements have been recently made by different observers that the active immunity was only of short duration. It seems, however, from the results so far obtained that the active antitoxic immunity will probably be as permanent as the immunity following toxin-antitoxin injections against diphtheria. The latter is very likely kept up by repeated mild infections with the Klebs-Loeffler bacillus which results from contact with carriers. The same holds true probably for scarlet fever. The scarlatinal hemolytic streptococcus is widely prevalent, and seems to play the same factor in natural immunity to scarlet fever that the diphtheria bacillus does in the immunity to diphtheria. We find, for instance, similar percentages of susceptible individuals in different social classes and at different age groups both with the Dick test and with the Schick test. It seems to me that this is an important indication that the artificial or active immunity will be of the same type as that to diphtheria—that if an antitoxic immunity is once produced by injections of scarlatinal toxin, it will remain more or less permanent as a result of subsequent repeated infections with the scarlatinal streptococcus which keep up the antibody content in the circulating blood and tissues.

"Natural immunity" to scarlet fever is probably as permanent as that to diphtheria after children have reached the age of 3 or 4 years. This is shown by a Dick retest on the pupils in several schools and institutions where the test had been applied and over 2800 children had shown a negative reaction from 3 to 14 months previously. Over 98% of these naturally immune pupils continued to give a negative reaction.

There is apparently no clinical difference between the results with the Dochez and the Dick antitoxic sera. Both these sera are prob-

ably inferior to Moser's serum, which is not only an antitoxic, but also a polyvalent antibacterial serum.

When the Moser, the Dochez or the Dick serum is injected intravenously in suitable early toxic cases of scarlet fever there is a definite relief of symptoms; the temperature drops as in the crisis of pneumonia and there is a striking improvement in the general condition of the patient. The septic complications of the disease, however, if fully developed at the time of the injection of the serum, are not apparently affected to any great extent by the purely antitoxic sera. Septic complications may develop even after the serum injection. We have seen involvement of the ears, glands and joints in cases so treated. These complications were not apparently as severe, however, as in those not so treated. Judging from the clinical results at the Willard Parker Hospital very little if any difference could be noted in the therapeutic efficiency on the septic complications of the Dick and Dochez sera.

A standard unit of scarlatinal antitoxin has been recently agreed upon. This consists of the amount of antitoxin that will neutralize 100 skin test doses of toxin. This unit is provisional as the toxin standard, the skin test dose (S. T. D.), has been only temporarily accepted. The therapeutic sera produced at the present time can neutralize with each cubic centimeter from 10,000 to 20,000 skin test doses of toxin. The therapeutic dose of the concentrated purified toxin has been used in quantities ranging from 10 to 60 c.c., depending on the age of the patient and the severity of the illness. The dose expressed in antitoxic units would vary from approximately 2000 to 10,000 units. Usually 1 dose suffices, although 2 or even 3 doses have been injected. The serum is administered intramuscularly or intravenously. The most striking clinical results are seen after the intravenous injections of the serum. The dose of serum for prophylactic purposes is from 1000 to 2000 units, i. e., from 5 to 10 c.c. of the concentrated serum.

The next slide shows that the Dick test, like the Schick test, may differ considerably in degree and intensity of reaction. It also shows that the control with the heated toxin is of

value in interpreting the test. Four different reactions, positive, negative, negative-pseudo and positive-combined, similar to those seen with the Schick test, may be noted also with the Dick test. The combined reaction is distinguished from the pseudo-reaction by the stronger reaction in the test arm than in the control arm. In the pseudo-reaction the test and control are of equal intensity. The pseudo-reaction is less frequent and less pronounced in the Dick test than in the Schick test, and is due to the autolyzed proteins of the streptococcus and the broken down substances in the toxin broth culture.

The slides that follow will illustrate some of the points I have already emphasized. The first slide represents an analysis of over 7000 persons tested with the Dick test and the results closely resemble those noted for the same age groups with the Schick test. The following slide shows the result with the Dick test in 2 private schools, where among 320 children 83% gave positive Dick reaction. This percentage is much higher than that found among the poorer classes, who are more frequently exposed by crowding, to repeated infections with the scarlatinal streptococcus. Such children were tested in institutions and some of the public schools of New York City. In a school in the Bronx, for instance, we found that 22% of the pupils were susceptible to scarlet fever and gave a positive Dick test. It is interesting to note that in this same school 21% of the children had been found susceptible to diphtheria. We have also noted that among nurses, who frequently come to the training schools from small towns and rural communities, there is generally a higher proportion of susceptibles. We found, for instance, from 41 to 73% positive reactors to scarlet fever as well as to diphtheria. These figures bear out the clinical observation that nurses from smaller communities are more prone to contract diphtheria and scarlet fever than are those born and brought up in large cities. In institutions with children from 5 to 16 years of age the proportion of positive Dick reactors is comparatively small. In schools where we had found a high percentage of negative reactions to the Schick test there was also a high percentage of negative reactions to the Dick test, but the same individuals who were positive to

the Schick test were not always positive to the Dick test, and vice versa.

This interesting slide shows that all doctors do not believe in race suicide. In one doctor's family, consisting of 8 boys, and ranging in age from 2 to 12 years, the mother and father were negative; the oldest boy was also negative as were the next 2 boys who had recently had scarlet fever. The 5 younger boys were all positive. In another doctor's family the mother and all the children except 1 gave a positive reaction. My own 3 children, whom you see represented in this group, were the first ones in New York City to be actively immunized against scarlet fever. They had been previously immunized against diphtheria with toxin-antitoxin when they were only 8 months of age.

Immunity to scarlet fever as well as to diphtheria is transmitted from mother to offspring through the placenta. If the mother is susceptible the infant is also susceptible to scarlet fever; if the mother is immune the infant is immune. The channels through which immunity to diphtheria and scarlet fever is transmitted from mother to offspring are probably the same as for measles and poliomyelitis. This is shown by the protection of infants from measles until the age of 6 months, if their mothers have had the disease in childhood. It is also probably true for poliomyelitis, many adults having acquired the infection and developed the immunity in previous years without having had necessarily the paralytic form of the disease. That this immunity is transmitted from mother to offspring through the placenta is probable from the relative infrequency with which infants under 6 months of age develop poliomyelitis. Hence, though we do not know the causative agents of measles and poliomyelitis, it would seem strongly advisable to use adult serum for the prophylaxis of these diseases. While convalescent serum is richer in antibody content than the serum of adults who have had these diseases in former years, yet we cannot usually obtain a sufficiently large supply of serum from children convalescent from measles or poliomyelitis. From parents and other adult relatives we could readily obtain the necessary amount of serum for prophylactic purposes. In measles prophylaxis it is in fact preferable to have a



serum not so rich in antibodies, as we would generally rather modify the disease in exposed healthy children than completely prevent it. During the epidemic of poliomyelitis in 1916 we used adult serum in quantities of 60 c.c. as a prophylactic measure.

We found it somewhat more difficult to produce an active immunity against scarlet fever among the more well-to-do classes, whose body cells had been stimulated but little by previous exposure to infection with the scarlatinal streptococcus, than among the poorer classes of the population whose children had been more exposed.

The same factors we found also to hold true in the active immunization against diphtheria.

The following slide shows that where one series of injections has not conferred complete immunity, a second series will generally result in 90 to 100% of negative Dick reactions.

The next slide shows that with the smaller doses of scarlatinal toxin all of the children who had had a slight positive Dick (+) reaction gave a negative retest. Of those with a moderately positive (+) reaction, 67% became negative, and of those with a strong positive (++) reaction 43% gave a negative Dick retest. In the last 2 groups an additional 20% and 51%, respectively, gave slightly positive reactions; in these a complete antitoxic immunity was produced by giving a second series of toxin injections. It seemed to us better to proceed cautiously at first and preferably to give 2 series of toxin injections, that were gradually increased, rather than to inject large doses that would be likely to produce constitutional reactions.

The Dick test was also applied as a routine in 616 cases of scarlet fever on admission to the Willard Parker Hospital and at weekly intervals afterward. Of the total number, 94% gave negative Dick tests during convalescence; the others showed slightly positive reactions. A strongly positive Dick reaction (++) in a child suspected of having scarlet fever, especially if a similar reaction is obtained again after 5 to 7 days, should raise doubt as to the diagnosis of the disease. Patients with true scarlet fever show as a rule only moderately positive (+) slightly positive (+) Dick reactions during the early stages of the disease and negative reactions after 6 to 10 days.

We make it a point to isolate patients who are sent in with the diagnosis of scarlet fever and show a (++) positive reaction, and then to give them a prophylactic dose of scarlatinal antitoxic serum.

Summarizing, we may say that the Dick test is useful in:

- (1) Determining susceptibility or immunity to scarlet fever.
- (2) Determining susceptibility of persons who need immediate passive immunization with scarlet fever antitoxin or active immunization with the toxin after exposure to scarlet fever.
- (3) Determining efficiency of active immunization with scarlet fever toxin.
- (4) The diagnosis of doubtful cases of scarlet fever.
- (5) The detailed study of scarlet fever.
- (6) Studying the nature of the toxin. Determining its ability to combine in multiple proportions with antitoxin.
- (7) Standardizing the antibody content of antitoxic sera.
- (8) Identification of strains of hemolytic streptococci and studying the question of carriers.
- (9) Determining directly on human beings, by increasing the number of skin test doses of toxin, the degree of antitoxic immunity of convalescents, negative Dick reactors, and persons actively immunized with toxin.

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## OBSERVATIONS ON ANGINA PECTORIS AND ITS DIAGNOSIS.

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Among the severe and dramatic symptoms referable to the cardiovascular system, angina pectoris stands first. Because of its gravity and our comparatively meagre knowledge of its production angina had always excited the interest of both the clinician and the pathologist.

Before entering further into a discussion of the subject it becomes necessary to de-

fine clearly what is meant by the term "angina pectoris." In the vast literature which has grown up about this disease, many conditions are described and referred to as angina which in no sense correspond to the original description given by Heberden in his classic paper read before the Royal College of Physicians in 1768. The term angina pectoris originally was applied to a symptom complex characterized by attacks of precordial or substernal pain, referred to the upper portion of the body, more especially to the left shoulder and arm, and associated with a sense of impending disaster. Later on it became popular to refer to many conditions associated with pain in the chest, more or less closely resembling angina, as angina pectoris. This led to efforts to classify angina into various types, and in the course of these attempts the unfortunate term of pseudo or false angina was created. The adoption of this term tended to increase rather than lessen confusion over the classification of angina pectoris. The name false, or pseudo, angina was intended to describe a group of cases in which precordial pain and discomfort were but manifestations of various toxic, nervous or gastric influences. Cases of this type are in no sense examples of true angina pectoris. The term false, or pseudo, angina is unnecessary, inaccurate and misleading. Much confusion and misunderstanding would be saved if this term was abolished from medical literature. The term angina pectoris should be reserved exclusively for the syndrome so admirably described by Heberden. This point of view has been repeatedly emphasized by Mackenzie, Albutt, Osler and others in the last 25 years. It is cases of this type that furnish the basis for the present discussion.

It is a common clinical observation that cases of true angina show wide variations in their severity. Perhaps the best recognized and on the whole the most satisfactory clinical grouping, is that which recurs so often in the writings of the late Sir William Osler. He divided cases of angina into 3 fairly clear-cut groups. The first, those which showed mild or atypical symptoms, the so-called "formes frustres" of the

French. Second, angina minor, the mild form in which though the pain is definitely cardiac and paroxysmal, it is never severe. And finally angina major, the group characterized by the typical agonizing, paroxysmal pain. In the writer's series, about one-half the cases fell into this latter group. The remaining were about equally divided between cases of angina minor and the atypical variety. Not infrequently cases began with mild or atypical attacks, and became more and more severe as the disease progressed.

Although it is not primarily the object of this paper to discuss the pathology and mechanism of angina pectoris, the subject is of so much interest and has for so long engaged medical attention without being definitely solved, that it may not be amiss to dwell for a little upon this phase of the subject. The outstanding feature of the pathology of every case of angina pectoris, is some form of arterial disease. In a large number of cases the responsible lesion is an aortitis. The lesion may or may not be part of a generalized arteriosclerotic process. A common form of aortitis frequently associated with angina pectoris, is the luetic, in which a meso-aortitis occurs, chiefly involving the root of the aorta and the orifices of the coronary arteries. True angina occurring before the age of 40, is nearly always due to this luetic type of aortic disease. On the other hand, nonluetic and senile forms of atheroma of the aorta may be associated with angina. Angina has often been found in association with aneurism of the arch of the aorta, particularly when the ascending portion of the aortic arch is the seat of dilation. In the writer's experience, nonluetic aortitis in association with hypertension, has not uncommonly been the cause of angina in women. In the present series nonluetic lesions of the aorta of this character were responsible presumably for the angina in over 50% of cases.

An equally important group of vascular lesions encountered in angina pectoris, are those of the coronary arteries. As far back as 1799, Parry and Jenner called attention to the occurrence of calcification of the coro-



nary arteries in angina pectoris. An increasing number of observations have led to the belief that disease of the coronary arteries is probably the most important cause of angina pectoris. Disturbances of the coronary circulation may be brought about in several ways. The coronary vessels may be occluded by a thrombus or embolism. In such instances the degree of cardiac damage depends obviously upon the size of the vessels obstructed. The sudden fatal termination of some cases of angina pectoris is due not infrequently to a block in one of the main coronary vessels. Anemic infarcts of the cardiac muscle that may lead to aneurism of the heart are the result of the less abrupt and extensive occlusions. Finally, the coronary arteries may be the seat of an obligative endarteritis, which gradually interferes with the circulation of the heart muscle. In a great many cases of angina pectoris, evidences of myocardial disease are demonstrable not only pathologically, but also from the clinical manifestations during life. Certainly 80% of the writer's cases at some time in their course presented evidences of myocardial degeneration which were recognizable on physical examination.

The angina which is sometimes observed in aortic insufficiency is in all reasonable likelihood the result of an associated aortitis, or due to interference with the coronary circulation incident to that valvular lesion. Even in the cases of chronic pericarditis, in which angina may be observed, disturbance of the nutrition of the heart muscle due to concomitant coronary disease, is probably responsible.

In his carefully studied series of cases, Harlow Brooks recently observed coronary sclerosis as a more frequent finding in fatal cases than aortitis. This observation is in contradistinction to the opinion of Sir Clifford Albutt who insists that aortitis is by far the most important factor in angina pectoris.

Although aortitis and coronary artery disease are undoubtedly frequently found in angina pectoris, it must be admitted that there are a great number of individuals suffering from these pathologic conditions that

never in life present any symptoms suggestive of angina. On the other hand, it not infrequently happens that an individual may present typical symptoms of angina pectoris during life, and yet at autopsy no evidences of aortic or coronary artery disease are to be found.

It is such inconsistencies, as well as the variability in the pathological findings, that have caused much debate and uncertainty as to the exact mechanism that is responsible for the attacks of angina pectoris. Huchard, the great French cardiologist, was able to collect no less than 80 explanations for the phenomenon of angina. The question is still far from settled. Of all the theories that have been advanced, there are several of sufficient importance to merit discussion.

The earliest belief was that angina pectoris was due to sclerosis of the coronary arteries. This theory is no longer looked upon as tenable since repeated observations have shown that atheroma of the coronary arteries is not necessarily associated with angina and that angina frequently occurs in individuals in whom at autopsy the coronary arteries are normal.

Another theory that has many enthusiastic advocates, is the one that attributes angina pectoris to spasm of the coronary arteries, a condition analogous to "intermittent claudication" in the extremities. The well known occurrence of spasm in the cerebral, retinal and peripheral vessels, adds no little weight to this theory. As Osler has pointed out, a spasm occurring in a coronary artery may so modify the action and tension of the heart that it works with a disturbed tension and that, therefore, there are produced stretching and strain sufficient to arouse painful sensations. Although the claudication theory has many advocates it must be admitted that from the standpoint of the experimental pathologist and physiologist, there is little or no evidence shown to substantiate this theory.

Sir Clifford Albutt has been most emphatic in his denial that coronary spasm is responsible for angina pectoris. Albutt maintains that an aortitis at the root of the first part of the arch of the aorta is responsible for most cases of angina pectoris. He

believes that the plaques found in aortitis produce an irritation of the sensory nerve-end plates which are abundant in and about the first part of the arch of the aorta, and that irritation of these sensory nerve organs occurs, especially whenever there is a rise in intra-aortic pressure which produces a stretching of the aorta and its investing membranes.

Sir James Mackenzie, on the other hand, holds that angina pectoris is a protective phenomenon, induced by exhaustion of the heart muscle. This exhaustion is the result of the disproportion between the strength of the heart muscle and the resistance which it has to overcome, and may result when a normal heart muscle has to work against increased peripheral resistance, or a degenerated heart muscle is opposed to a normal blood pressure. In either event, exhaustion is the result. Exhaustion he believes produces pain by means of what has been termed a viscerosensory reflex. His explanation of this mechanism is that stimuli are carried from the heart to the spinal cord, and there set up irritation of the nerve cells which lie in close proximity to these fibers which convey stimuli from the heart. This irritation of the adjacent nerve cells brings about a response in the form of pain which is referred to the peripheral distribution of the sensory nerves; as well as muscular contractions resulting from motor nerve irritation. In connection with this theory of Mackenzie, it is interesting to note the relief from pain that has recently been obtained in cases of angina pectoris, by blocking the sensory impulses that originate in the heart and are conveyed to the cord by means of severing the cervical cord of the sympathetic.

One of the most satisfactory theories for the phenomenon of angina pectoris has recently been advanced by William D. Reid. He points out that angina pectoris is a functional condition just as are the various arrhythmias, and that angina is commonly associated with 3 types of cardiovascular disease, namely, arteriosclerotic heart disease, cardiovascular syphilis and hypertension with its cardiac changes. Reid also points out that angina pectoris is character-

ized by a close connection with exercise, both physical and mental, and that when the affected person ceases all activity, relief frequently occurs. From a careful review of what is known of the physiology of exercise, it is evident that in the circulatory changes in exercise there is a dilation of the splanchnics and peripheral vessels brought about probably by reflex stimulation through the pressor fibres of the vagi. This dilation of the peripheral vessels is protective and allows the heart to contract without overstrain. Reid suggests that it is a failure of this reflex dilatation of the peripheral vessels which produces the picture of angina pectoris. In the types of cardiovascular disease which are associated with angina pectoris, normal reflex dilatation of the blood-vessels is likely to be interfered with during exercise. If this protective function fails, it leads to a rise of pressure in the first part of the aorta and in the cavity of the left ventricle. This pressure in turn may irritate the local nerve-end plates, which brings about pain.

The symptomatology of angina pectoris and the clinical course of the disease, are too well known to require systematic discussion, and will be dealt with only in so far as they concern the diagnostic problems presented by the syndrome. There is little or no difficulty in recognizing angina pectoris when it presents itself in the clear cut, typical form. The paroxysmal nature of the attack induced by physical over-exertion, over-eating, or emotional disturbances; the agonizing character of the pain, either precordial or substernal; the area to which the pain is referred, the left shoulder, the neck, the flexor surface of the left arm and sometimes also the right; the viselike constriction of the chest; the pallor and immobility of the patient; the expression of suffering associated with the fear of impending disaster, furnish a picture that is as characteristic as it is enduring.

The position of the pain is said by some to be of diagnostic help in determining the character of the underlying lesion. If the pain is definitely precordial, it is most likely the result of coronary artery disease.



whereas, substernal pain, particularly that felt under the first part of the sternum and radiating up into the neck, may be ascribed to an aortitis.

The appearance of fever following an attack of angina, is also of diagnostic import. In the writer's experience, a rise in temperature persisting for several days after the attack, if it is not due to some associated infection, suggests the possibility that infarction has taken place in the cardiac wall. This was exemplified in several cases in which fever followed for several days after violent paroxysm of pain. At the end of this time a fatal termination of the disease took place. In these cases autopsy showed recent and extensive infarction of the cardiac muscle.

One of the chief sources of diagnostic difficulty has arisen when the pain was not typically precordial, but was felt most severely under the lower end of the sternum or in the epigastrium, the so-called cases of "angina abdominalis". In these cases it is by no means easy to decide whether one is dealing with a primary disturbance of the cardiovascular apparatus, or whether the source of the pain is some abdominal disorder. In this connection it should be remembered that it is possible for an individual to suffer from several affections and that there is nothing inconsistent about the simultaneous existence of some upper abdominal lesion with angina. As an example of this, several cases that have come under observation may be cited.

A hustling, energetic business man, 58, who was subjected to great financial and domestic worry and had had a gangrenous appendix removed with a good recovery, shortly afterward suffered from an assortment of gastric symptoms. Six months after operation, his heart was apparently normal, his systolic blood pressure 133, diastolic 80, and his peripheral vessels were soft. A year later he began to complain of epigastric and substernal discomfort, associated with eructations of gas and regurgitation of acid material. At that time his systolic blood pressure was 150, diastolic 100. The heart sounds were of fair quality. An x-ray examination of his gastro-intest-

inal tract was negative, and his gastric analysis showed a marked hyperacidity. His symptoms were somewhat relieved by alkalies and the regulation of his diet. The patient himself observed that the more rest he took, the less epigastric discomfort he suffered. However, all efforts directed toward the control of his pain by treatment of his gastro-intestinal tract, proved rather disappointing. Subsequent observation showed that the epigastric and substernal pain was growing steadily worse as the result of the increased mental and business strain. He began to describe his sensation as a "cement block" pressing upon him under the lower end of his sternum. He discovered that his discomfort was increased by all forms of physical and mental exertion. He voluntarily began to give up walking because of the discomfort which resulted therefrom. By this time perfectly definite changes were observable in his cardiovascular apparatus. His systolic blood pressure had gone up to 170, diastolic 110. A soft, blowing systolic murmur developed at the aortic area, and an arrhythmia due to extrasystoles was a frequent occurrence. Subsequent observation amply demonstrated that the substernal and epigastric discomfort and sense of pressure originally thought to be due to digestive disturbances, was in reality cardiac. These manifestations of angina, under complete physical and mental rest and regulation of his life, have largely disappeared, but even now they will recur the moment he indulges in any over-exertion or nervous over-strain. In the writer's experience, the location and character of the pain of a gastric or duodenal ulcer, the time of occurrence of the pain in relation to meals, the relief afforded from the taking of food and alkalies, usually prevents much confusion between these conditions and angina pectoris.

On the other hand, much more difficulty has been experienced in differentiating between gall-bladder disease and angina. The frequency with which the two conditions coexist may be seen from some statistics recently quoted from the Mayo Clinic, where in 86 autopsies on individuals with known coronary artery disease, 24% had

diseased gall-bladders. In this connection a most interesting case came under the observation of the writer. A man in his early sixties who had led an active and strenuous existence, who had lived not wisely but too well, whose peripheral vessels were distinctly tortuous, and whose blood pressure was elevated, developed severe pain under the lower part of his sternum. At the same time he presented definite evidence of myocardial weakness and a distinct arrhythmia. The substernal pain became more paroxysmal and radiated up over the precordium, but never to the arm, and finally it became so severe that it was only relieved by morphia. Exertion and excitement as well as a full meal, invariably precipitated an attack of pain. Repeated observations led to the conclusion that the pain was due to angina pectoris. Some months later, following an unusually severe attack of pain centering under the sternum and in the epigastrium, the patient developed a definite and persistent jaundice. Later this jaundice was associated with tenderness in the region of the gall-bladder. The pain was referred to the right scapula. A diagnosis of gall-stones was made and in spite of the cardiac condition operation was performed and a number of stones removed from an infected gall-bladder, after which the patient steadily improved. For many months there has been no recurrence of the attacks of alleged angina pectoris. Although the diagnosis of angina may not have been incorrect, in all likelihood his pain was due largely to biliary tract disease. Instances of this kind, both from the literature and from personal experience, might be multiplied in order to emphasize the difficulties that arise in differentiating angina pectoris from conditions of the upper abdomen.

The fact that attacks of angina pectoris frequently come on after eating and are sometimes relieved by the belching of gas, accentuates this difficulty. It is a frequent occurrence to have a patient suffering from angina pectoris attribute this discomfort to "indigestion". The fact, however, that attacks of angina usually follow exertion or excitement, and are relieved by rest, that there is a characteristic radiation of the

pain and that as a rule concomitant evidence of cardiovascular disease exist, should direct the attention of the observing physician to the state of the cardiovascular apparatus, thus avoiding serious diagnostic errors which might otherwise arise. It is the conviction of the writer that the so-called attacks of acute indigestion with their fatal termination, have little or nothing to do with the digestive tract and are in reality attacks of angina pectoris and frequently due to coronary thrombosis.

It is undeniably true that there are many instances of persons suffering from functional disorders of the stomach, in whom gaseous distention of that organ produces a sense of fullness and discomfort and even considerable pain in the precordium. In these cases, however, the pains are usually further to the left and lower down than in true angina. The pain is not brought on by exertion and is not associated with immobility and a fear of dissolution. A distended stomach can usually be demonstrated and the symptoms clear up with the correction of the gastric conditions. On the other hand, the possibility of cardiac disease must be considered. The picture is further confused by the fact that it is not unusual for gastric disorders to be associated with functional disturbances of the sympathetic nervous system that frequently lead to arrhythmia—such as extrasystoles that add to the impression that the myocardium is at fault.

As has been mentioned, coronary thrombosis and embolism may occur in the course of angina and may be responsible for some of the most severe and fatal attacks. Such attacks may be ushered in by sudden severe substernal and epigastric pain, associated with pallor, cyanosis, and shock resembling in every way acute upper abdominal surgical catastrophies. At times cases of this type have been rushed to operation as instances of acute pancreatitis or perforated gastric ulcer. To add to the diagnostic confusion when cases of thrombosis and infarction are not rapidly fatal, the pain may persist for days, due to an associated pericarditis, which may present tenderness and rigidity of the upper abdomen, as well as



fever and considerable leukocytosis. This further confuses the picture and may lead the unwary to lose sight of the vascular nature of the disorder by directing the attention too much to the abdominal manifestations.

Perhaps the most common diagnostic errors occur in the atypical and mild cases. Here outspoken paroxysms of angina do not occur; the pain may be fleeting and slight—indeed there may be no real pain for some time, only varied sensations of oppression and precordial discomfort. Cases of this type are often diagnosed and treated as intercostal neuralgia, muscular rheumatism, and indigestion. Their true nature is not revealed until some of the graver manifestations of vascular disease supervene, which might have been averted by earlier recognition and proper treatment. The correct diagnosis is made by looking upon all chest pain and discomfort as suspicious of angina pectoris until proved otherwise; by a careful history, taking into account the character of the pain and the time and method of its occurrence; and by a complete examination, which invariably reveals some evidences of myocardial weakness such as cardiac enlargement, murmurs at the valve areas and arrhythmias, or the signs of a chronic aortitis, namely, widening of the aortic arch, suprasternal pulsation, a peculiar amphoric quality of the aortic second sound, and an aortic systolic murmur.

There are still other conditions that may be confounded with angina, such as plastic pericarditis, which may actually follow a coronary thrombosis or embolism. Pericarditis may be recognized by the physical signs and the different character of the pain which is as a rule continuous. Even cardio-spasm, with its characteristic cramp-like substernal pain, has been confounded with angina. But the dysphagia, the x-ray findings, and other symptoms peculiar to the former condition render the differentiation easy.

Various functional nervous disorders are not infrequently associated with pain referred to the left chest and even to the precordium. In such conditions the diag-

nosis of angina is too often erroneously made.

In this group may be included the cases of so-called neurocirculatory asthenia, a condition in which precordial discomfort and even acute cardiac pain are frequently observed. However, in this syndrome the pain is not associated particularly with exertion; it may come on with the patient at rest and is especially liable to occur with emotional states. Furthermore, in neurocirculatory asthenia the precordial pain is not referred in a characteristic manner as it is in true angina. The individuals that suffer from this psychoneurosis are usually young and present unmistakable evidence of vasomotor instability, such as excessive sweating, a feeble labile pulse, low blood pressure, cold mottled skin, flushes, and a pronounced fatiguability, without adequate objective evidence of cardiac disease.

It not infrequently becomes necessary to differentiate the precordial distress observed in hysteria from real angina pectoris. In hysterics the cardiac pains are irregular in occurrence, they are more apt to come on at night when the patient is alone, than after exertion. Hysterical pain is not associated with pallor, silence, and immobility. On the contrary, such patients are prone to be restless, walk about, and to complain and court sympathy. If in addition the well-known hysterical stigmas are taken into consideration, the diagnosis offers little difficulty.

Although the importance of recognizing angina pectoris when it exists is obvious, it is equally important never to make the diagnosis of angina on insufficient evidence. Many individuals have suffered untold mental anguish and physical harm from being branded incorrectly as cases of angina pectoris. Too often such a diagnosis hastily made has doomed patients to long periods of unnecessary enforced inactivity with its attendant economic loss as well as to hopeless depression born of constant dread of sudden death. There is no diagnosis that strikes such terror to the lay mind as angina pectoris, and with good reason. Therefore, physicians should exercise more care in employing this term with patients. It

is frequently advisable to use some less dreaded synonym to patients, even when they are victims of the condition. Certain it is that from the standpoint of the patient's peace of mind and happiness, when the diagnosis of angina pectoris is suspected it should never be definitely made and stated until it has been established beyond peradventure of a doubt.

In conclusion, it may be stated that the difficulty of excluding angina is not so great in younger individuals whose circulations do not show evidences of involuntary change. In young people true angina practically never occurs except in connection with luetic aortitis and certain endocardial lesions (aortic regurgitation and mitral stenosis). In older people the problem is quite different and much more difficult; in them the possibility of angina must always be borne in mind, but it must also be remembered that numerous extracardiac disturbances may simulate angina.

The foregoing is in no sense an exhaustive discussion of angina, nor is it intended to be such. It is merely an attempt to emphasize certain aspects of a frequent and serious disease that have interested the writer and certain diagnostic difficulties that have too frequently caused him confusion and perplexity.

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## CALCULUS OF THE KIDNEY AND URETER.

### A Clinical Study of 34 Cases.

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This study of stone in the kidney and ureter was undertaken on a group of 34 patients with particular reference to the pathology as it influenced the treatment and with special reference to certain outstanding factors. The particular group of cases was selected only because the data was both complete and accurate. In this study no attention whatever has been paid to the question of etiology of

calculus. We have classified the cases into 2 groups: First, cases of stone in the kidney, whether associated with ureteral calculi or not; secondly, a group of cases presenting only ureteral calculi. The first group consists of 16 patients and the second group of 18. In an analysis of these figures presented in the chart, it is interesting to note that of the cases selected only because data was complete, it happens that there were an equal number of male and female patients. Similar studies of larger numbers of patients have all indicated the greatest incidence of calculus in about the third or fourth decade of life and in keeping with this we find that the average age in this group of patients is 40.9 years.

When we consider the pathology, it is an extremely interesting fact that in this group of cases there occurred 2 congenital abnormalities, the recognition of which could be fairly accurately determined before operation. The occurrence of congenital abnormalities in urologic cases, as has been pointed out by Eisendrath and others, is most vital in its bearing on the management of the sound kidney in nephrectomy. Incidence of pyonephrosis,—5 out of 34 cases—shows how common it is for cases to come under treatment only after irreparable destruction of the kidney, when serious symptoms compel attention after a long, latent period of stone formation.

As is to be expected in a group of ureteral calculus cases, hydronephrosis occurred in a large proportion of the cases, having been met with 7 times; in this group are included 2 cases in which hydronephrosis was present, although in no way related to the stone problem; in these 2 cases hydronephrosis existed with a stone in the cortex of the kidney in contradistinction to the 7 cases where it was the direct result of the ureteral obstruction by a stone. There were 2 cases of osteo-arthritis in which there seemed to be a relationship between the arthritis, a focal infection and stone, for in both of them a focus of infection was found. The urine showed streptococcus, and we were able to demonstrate the presence of osteo-arthritis by x-rays.

Regarding distribution of the stones, it is interesting to note that 7 cases presented multiple stones in a distribution that shows very clearly the possibility of unrelated and rather



erratic deposition of calculi. There is only 1 case with bilateral ureteral calculi, and only 1 case of bilateral renal calculi. The group of mixed stone distribution is particularly important from the standpoint of treatment, for it would be very easy in this group to overlook a calculus where the symptoms do not especially attract attention, and where it is only discovered on careful detailed study of the patient. And yet it is evident that such a calculus overlooked is a source of danger to the patient.

In an analysis of the symptoms in this group of cases, the figures bear out the need for careful study of the individual patient in the presence of symptoms which often are not clearly indicative of local pathology. It will be noticed that 11 cases presented abdominal pain, and that 14 cases presented pain only of a dull character, and in reviewing the history of these patients one is impressed with the complete absence in the clinical history of symptoms commonly associated in our mind with stones. In the matter of location, character and distribution of the pain, this group establishes further the interesting fact that there was complete absence of colic in 12 cases, that it was mild in 14 cases, not referred in 9 cases and was typical in all respects in only 8 cases.

The complete absence of gross hematuria in 26 of these cases emphasizes again how unreliable that symptom is in the diagnosis of stone, as has been pointed out by Cabot, Cunningham and others. Although hematuria was absent in 5 of these cases, on careful study of the urine we found red blood cells at some time or other in very trifling numbers, in all of the cases. Pus cells in sufficient amount to be of clinical significance were found in only 12 of the cases, and albumin was absent in 16 cases.

It will be noticed 11 patients presented marked evidence of gastro-intestinal disturbance, characterized by nausea, vomiting and either gross distention or subjective gas disturbance. One patient was referred to the hospital with a diagnosis of intestinal obstruction; this case being the one of stones in both kidneys and the left ureter and presenting a well marked paralytic ileus.

Twenty-five of these patients came under

our care with more or less marked evidence of urinary sepsis, and 3 of the patients presented clinical signs of renal failure and required very energetic treatment in preparation for operation. Three of the ureteral cases presented retention as a prominent symptom, one of the patients having been operated upon for appendicitis and having developed the first attack of retention 3 days after operation, with recurrence for a period of several months and requiring frequent catheterization. In this case we found 3 small calculi near the vesical end of the ureter, which we demonstrated not only by x-rays but by the wax-tipped catheter.

There was definite disturbance of bladder function, in the form of frequency of greater or less degree, in 23 of these cases but urination was entirely normal in 11 cases.

The treatment of these cases can be more properly considered under separate headings—that of the renal and that of the ureteral group. Of the 16 renal cases it will be noticed that fragments of calculi were left after operation in two cases. This emphasizes the necessity for careful immediate postoperative x-ray study of these cases for it is probable that many of the cases reported as showing recurrence after a lapse of time following removal of a calculus, are really cases in which calculi have been overlooked. We have adopted the routine of immediate x-ray examination as soon after operation as practicable, and we are now conducting a series of experiments to make possible such examination of the kidney at the time of operation, by a technic which will in no way interfere with the operative field, by means of a skiagram of the exposed kidney.

In this group, nephrectomy was necessary in 7 cases and, although we prefer the operation of pyelotomy, in 5 cases simple nephrotomy offered a quicker approach to the stone. We condemn, as a routine, the so-called "post-mortem" incision of the kidney for the extraction of a calculus, and that method was not employed in this series.

In the ureteral cases we were successful in the removal of quite a number of the calculi by simple cystoscopic procedure. Four cases were treated with practically no inconvenience to the patients, and with only a few days of

hospitalization, by direct extraction of the calculus with the aid of cystoscopic forceps. In 11 cases the calculus was passed following dilatation. In 1 of this group of 18 cases, that of a doctor, the calculus was seen to travel from the very upper limit of the ureter downward and was expelled in a period of 57 days with very minor attacks of pain. In his case no instrumentation whatever was practiced. There was complete failure of cystoscopic procedure in 5 cases, and in one of these patients we proved conclusively by x-ray that the operating instruments entered the ureter at an angle which precluded the possibility of ever reaching the calculus.

Of these 18 cases, 9 came to operation and of these 9 the stone was reached in 4 by lumbar route and in 5 cases by the abdominal route. For the lumbar operation we employ a relatively short, oblique incision and seldom disturb the kidney, bringing the ureter into the field of operation by means of 2 soft tapes, so as to avoid instrumental injury, and with the utmost care and gentleness in the handling of the ureter itself. All of these cases were drained for 1 to 3 weeks.

One patient presenting calculi of both kidneys with multiple calculi of the prostate died within 36 hours after operation and this death we feel should not have occurred. There was every reason to expect prompt recovery for there was no evidence of infection. The patient was a strong, young adult but, in spite of every effort at restoring renal function, anuria was complete and we were unable to restore the function of either kidney following a simple nephrotomy on the right side. This death emphasizes, as has been pointed out so often by the Mayo Clinic, the great danger of operation in cases presenting stone in both kidneys or one kidney and the opposite ureter.

Five of these 34 patients were treated without hospitalization and of the 29 cases that were in the hospital, the average stay was 17½ days. So that, in spite of the fact that many of the patients presented serious complications both before and after operation the prognosis is seen to be about that of the average appendix or gall-bladder case.

Of this series of cases, 27—or 79%—are said to be cured. Our standard of cure is the

absence of symptoms, complete disappearance of all evidence of stone in careful x-ray study, return of the urine to normal with absence of infection, and normal functional tests. Two cases are improved, these 2 being cases complicated with the definite clinical evidence of pyelonephritis. There remain 4 cases in which the calculus has not yet been removed, which have either refused operation or in which operation is not contemplated.

#### CHART.

##### Number of patients:

Male .....	17	Foreign born	10
Female .....	17	U. S. ....	24
Total .....	34		

##### Ages:

Year	Number cases
20-30	5
30-40	13
40-50	7
50-60	5
60-70	4
Average age:	40.9 yrs.

##### Location of stones:

Right kidney	Left kidney	Right ureter	Left ureter
7 cases	12 cases	A: 2 cases	1 Case
		B: 2 "	1 "
		C: 5 "	10 "
Total: 7	12	9	12

Note: Ureter considered as presenting three segments: i.e.,

- A=To lower pole kidney
- B=To iliac crossing
- C=To bladder

Cases single stones.....	22
Cases branched stones.....	4
Cases multiple stones.....	12

##### Multiple stones:

	R. kidney	L. kidney	R. ureter	L. ureter
1 Case	25	1		2
1 Case		2		
1 Case				2
1 Case	3	1		
1 Case	2			
1 Case	2	1		
1 Case			1	1
Total number stones in 7 cases with multiple stones .....				43

##### Duration of symptoms:

1. Total number of symptoms.....114½
2. Shortest period of symptoms: Case 1....1 day
3. Longest period of symptoms: Cases 2...20 years
4. Aver. per'd of sy'ptoms: Cases 34...3 ys. 2 mos.

##### Pathology:

Hydronephrosis .....	7 cases
Pyelonephritis .....	5 "
Pyonephrosis .....	5 "
Congenital abnormality...	2 "
Osteo-arthritis .....	2 "

##### X-ray—Pyelogram:

X-ray .....	34 positive: (Note)
Pyelograms...	18

Note.—In all the cases x-ray examination was positive, but in a large number of cases several skiagrams with cystoscopic study were necessary for final diagnosis.



<b>Pain:</b>		
Location	Character	Referred
Abdominal: 11	Dull: 14	To penis or tes-
Lumbar: 23	Severe: 20	ticle ..... 9
		To bladder ..... 4
		To outer side
		thigh ..... 2
		To posterior sur-
		face thigh ..... 1
		To lower abdom-
		en or back ..... 8
		To groin & ant.
		crural reg. .... 3
		Not referred .... 9

<b>Colic:</b>		
	Typical .....	8
	Mild .....	14
	Absent .....	12

<b>Associated symptoms:</b>	
Sepsis and high temperature.....	5
Failure renal function .....	3
Intestinal obstruction .....	1
Marked gastro-intestinal symptoms	
nausea, vomiting, gas .....	11
Retention (1 or more attacks).....	3

<b>Vesical disturbance:</b>		
Frequency:	{ Slight .....	12
	{ Marked .....	11
	{ Absent .....	11

<b>Hematuria:</b>		
	Gross .....	8
	Microscopic .....	29
	Absent .....	5

<b>Urine:</b>		
	Albumen .....	18
	Casts .....	8
	Pus .....	12
	Red blood cells.....	34

<b>Treatment:</b>		
	Ureteral Cases, 18	Renal Cases, 16
Cysto- scopic	{ Dilatation 12	
	{ Forceps .. 4	
	{ Spontane- ous ..... 1	
	{ Failure ... 4	
Opera- tive Pro- cedure	{ Lumbar	
	{ uretero- tomy .... 4	Pyelotomy ..... 4
	{ Abdominal	Nephrotomy ..... 5
	{ uretero- tomy .... 5	Nephrectomy ..... 7
		Calculus left after operation ..... 2

<b>Postoperative complications:</b>	
Wound infections .....	4
(Primary kidney infections, 14) (Note)	
Pyelonephritis .....	1
Hemorrhage and anuria .....	1

<b>Days in hospital:</b>	
Cases 29—Average 17.5 days	
Cases, 5—Treated without hospitalization	

<b>Final Results:</b>	
Cured .....	27—79.34%
Improved .....	2—5.66%
Unchanged .....	4—12.00%
Died .....	1—3.00%

Note.—Although of the operated cases 14 showed preoperative infection of the kidney, only 4 of these cases developed postoperative wound infection.

In a survey of our handling of ureteral and renal calculus we were interested in determining not only the final result but, also, whether

we were covering the diagnosis accurately. The death of 1 patient in this small series of cases raises the mortality and strikingly illustrates the need for the most thorough preoperative study and for vigilance in postoperative care, since our failure in this case involves failure to deal bodily with terminal anuria by cystoscopic and operative procedures when medical measures failed. On the other hand, a case was safely carried through 2 major operations, with complete clinical cure, which presented bilateral renal calculi, 25 stones in the right kidney with pyonephrosis and 1 stone in the left kidney with 2 calculi in the terminal portion of the left ureter with obstruction and hydro-ureter. The patient entered the hospital almost moribund with advanced urinary sepsis, pyelonephritis and serious toxemia, requiring 2 blood transfusions, almost continuous hypodermoclysis—the most complicated urologic problem we have had in our practice. In the management of the 10 handicapped cases of pyelonephritis or pyonephrosis (all of which showed more or less virulent infection and some advanced renal failure) we have made our study of renal function cover also the larger question of the general physiologic balance of the patient. This has included not only the P. S. P. test—absolute and the differential for both kidneys (time of appearance of dye after intravenous injection and collection for not less than 15 minutes)—but, as well, the relative urea percentage and blood chemistry and blood count with coagulation time. It will be seen on the other hand from a study of the tables of the renal and ureteral cases that urinalysis offers little aid in the diagnosis of stone of the kidney or ureter. It cannot determine either diagnosis nor prognosis.

Furthermore, the chart shows that stones do not present the typical text-book picture of renal colic with hematuria, for typical pain occurred in only 8 cases; in other words, it was typical in only 21% and atypical in 79%. One of the cases had been treated for “sciatica or rheumatism” for several months, another for “cystitis and lumbago” for 10 years and at least 20% had been subjected to one or more abdominal operations. Calculus, like tuberculosis and hydronephrosis, may present such atypical symptoms in such a large number of cases as to make it necessary to consider

the possibility of renal and ureteral cases in obscure abdominal conditions. Both the general practitioner and the general surgeon should bear in mind that the kidney and ureter, because deeply situated, anatomically concealed, clinically often vague and confusing in their behavior, may be the cause of the symptoms which the doctor tries to fasten on the more accessible appendix or gall-bladder. In this confusing group of cases, pain is the predominating symptom in both acute and chronic cases; barring the emergency, where it is safer perhaps to remove a normal appendix than to delay, in the majority of subacute and chronic cases it is vastly more economical and salutary for the patient to exclude renal or ureteral calculus than to make the discovery of a stone after ill-directed treatment and useless surgery.

Accurate diagnosis of a stone can be made by the x-rays. The picture was accurate in 100% of both groups of stone cases. Of course, not every shadow shown on the skiagram is a calculus. In the kidney, the stone or stones were demonstrated accurately in 75% of the cases but in 25% a pyelogram was essential for accurate data as to location (cortex, calyx, or pelvis) and as to associated pathology. None of our cases presented a cystin stone, which we all know does not cast a shadow. We found it advisable to take not merely one but several skiagrams and always to make the study include the entire tract, even sometimes supplemented by study of the spine, and a gastro-intestinal series. It pays to be accurate in the atypical case.

The mere presence of a shadow—no matter how well delineated—in the course of the ureter does not establish the diagnosis of ureteral calculus. In ureteral calculus x-rays alone are not diagnostic. The shadow must be proved to lie in the lumen of the ureter by a skiagram with either the opaque catheter or ureterography, frequently by the method of a double exposure with the opaque catheter and at times by the confirmatory wax-tipped catheter. In other words, the x-rays alone can, perhaps, exclude ureteral calculus, but it would be safer to supplement such examination by complete cystoscopic study. The absence of a shadow

anywhere in the course of the ureter is rare, since such shadows may be caused by calcified lymph nodes, phleboliths, etc. Conversely, therefore, the mere presence of a shadow in the course of the ureter on the skiagram does not establish anything of value in the diagnosis. In this series we found it necessary to supplement our x-ray study by cystoscopic procedures in all of the 18 ureteral cases. In this work the new cystoscopic table with x-ray equipment devised by Dr. J. Bentley Squier offers the finest opportunity for accuracy to both the urologist and the roentgenologist, who can work in perfect harmony with the maximum comfort to the patient.

### Conclusions.

(1) X-ray examination covering the entire genito-urinary tract is diagnostic in renal calculus, although more than 25% of cases require supplementary pyelogram; all ureteral calculi require cystoscopic study also. Post-operative x-ray study will disclose fragments left at operation, occurring in 2 of the cases reported, cases which would otherwise be said to show recurrence later on.

(2) Symptoms are characteristic and typical in only 30 to 40% of the cases which present "colic"; pain varies from a dull backache to vague abdominal pain; gross hematuria occurs in only 25% of all cases, though red blood cells are found in appreciable amount in 75% of cases; pus cells, albumin and casts are not diagnostic either by their presence or absence.

(3) Disturbance of urination varies from retention occurring in 3 cases to increased frequency in 23 cases or 68%; bladder disturbance is associated more commonly with infection, which was present in about 40% of the cases.

(4) One case of congenital atrophy of the left kidney with calculus (with pyelonephritis) and another case of multiple calculi in a right kidney with pyonephrosis which had 2 pelves with 1 ureter, the left kidney presenting a double pelvis with 2 ureters, demonstrate the liability of congenital abnormalities. Stones are found in erratic distribution, as is shown in the chart and with associated pathology



varying from simple pyelitis to destruction of the kidney requiring nephrectomy in 7 out of 34 cases, or 21%. On the other hand, severe colic may be found in calculus with practically no serious pathology of kidney or ureter.

(5) Treatment of renal calculus is expectant in the case of small, inoffensive calculus locked in the cortex of the kidney in the absence of associated lesions or symptoms warranting operation.

(6) Operation for renal calculus is, preferably, pyelotomy or nephrotomy, or a combination of both, or nephrectomy.

(7) Ureteral calculi will pass into the bladder in over 50% of cases either spontaneously or following cystoscopic procedures of dilatation by a variety of methods. Extraction by forceps should be reserved for calculi in the last 3 or 4 centimeters of the ureter; it was successful in 2 of our cases. Besides opiates, atropin, alkali diuretics and heat, including hot colonic irrigation, we believe good results follow the use of piperazine and distilled water. The sovereign diuretic and stone remover is water in large amounts.

(8) Operation in ureteral cases is indicated in less than 50% of the cases by acute obstruction (rare), by the presence of infection (common) or frequency of recurrent attacks, especially with the failure of medical or cystoscopic procedures or by demonstrable progressive impairment of kidney function.

(9) Ureterolithotomy is abdominal for all stones well below the level of the lower pole of the kidney, varying from the Gibson incision, done in 2 of the 34 cases, to a small intermuscular incision; it is lumbar for stones located just below the lower pole of the kidney or above that point; in this series of 9 cases operated, the lumbar incision was employed 4 times and the abdominal 5.

(10) The management of calculous disease of the kidney or ureter requires painstaking study by x-rays, cystoscopy, laboratory and—above all—sound clinical investigation including attention to the problem of focal infection, dietetic and general hygienic supervision, and a conservative, well-considered policy in the matter of operation adapted to the individual case.

## DIABETES MELLITUS IN INFANCY, WITH THE REPORT OF A CASE.

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Diabetes mellitus in infancy was first mentioned in the literature in 1826 by De Wees, who reported 3 cases in infants under 15 months of age, all teething at the time. They had symptoms of thirst, polyuria and emaciation. It is interesting to note the treatment. He says, "we could not procure the urine to make a trial, therefore could not tell whether it was sweet or not. We ordered the bowels kept freely open, and a quantity of spirit of turpentine to be put on the cloths of the children, so as to put them in a terebinhinate atmosphere. This plan succeeded completely in every case". According to our present knowledge, we can hardly class these cases as truly diabetic.

The first authentic case of diabetes mellitus in infancy was reported by Häuner in 1850. The patient was an infant 11 months old with symptoms of emaciation, thirst, "sweet urine", and polyuria, passing from 7000 to 9000 c.c. of urine in 24 hours. Death occurred in coma about 1 month after the onset of the disease.

The youngest infant reported is that of Kitselle in 1852. The patient was the observer's own son, who was strong and healthy at birth. A few days later he began to pass a large amount of urine "characteristic to smell and taste of diabetic urine". When 14 days old the child had "a warm dry skin, ravenous appetite, thirst and great emaciation, looking like a skeleton". The infant grew steadily worse, and death occurred at 8 months of age.

Külz in 1878 was the first writer to summarize the cases reported in literature. His collection of 111 cases in infants and children up to the age of 15, included 7 cases under 2 years of age. In 1889 Stern collected 117 cases, of which number, 21 had previously been reported by Külz. In Stern's series, 10 cases were under 2 years of age. In 1896 Wegeli collected 108 cases

not reported by either Külz or Stern. Of this number, 11 cases were under 2 years of age. In 1919 Langstein reported 4 cases under 2 years of age. In this series, 2 infants had anomalies of the brain (anencephalus in one and hydrocephalus in the other). In 1913 Knox collected from the literature 16 cases of diabetes mellitus in infants under 1 year of age; 8 of these cases had previously been reported by Külz, Stern, Wegeli, and Langstein. The total number of cases under 2 years of age reported by Külz, Stern, Wegeli, Langstein, and Knox up to the year 1913, numbered 41. Since that time, cases under 2 years of age have been reported by Joslin (1916), Allen (1922), Geyelin (1922), La Salle (1923), Johannsen (1923), and Hartmann (1925, 2 cases).

A case observed in a child 17 months of age, is described below:

*Case:* R. S. Male infant 17 months of age.

*Family history:* Father and mother both alive and well. Neither has had any serious illnesses. Both have had recent urinalyses with normal reports. There was no history of diabetes mellitus in any other member of the family.

*Past history:* The birth of the child was normal; his weight was 11 pounds; he had no illnesses excepting occasional colds or colic. He was breast-fed for 2 weeks, and after that was placed on a bottle feeding composed of 1 quart of grade A milk, 2 tablespoonfuls of maltose, and water. This was divided into 6 feedings for the day. The feedings were gradually increased in amount and strength as the appetite increased. The child gained in weight and was apparently normal in every way. A few days before admission to the hospital, he weighed 32 pounds. His diet just previous to this last illness was approximately as follows: Breakfast (9 a. m.) 1 cupful orange juice, 1 slice toast and 1 glass milk. Lunch (1 p. m.) Beef or chicken broth with rice or potatoes, cooked spinach or apple sauce or custard, and 1 glass milk. Supper (6 p. m.) 1 cup custard, 1 soft boiled egg, and 1 glass milk.

*Present illness:* On May 22, 1925, the parents noticed that the child was very thirsty—he drank water very often and required large amounts to satisfy his thirst. He would take

a drink of water, then go to his toys and play, but in a short time would return asking for more water. His urination became so frequent that his diaper had to be changed from 10 to 15 times a day. At this time the baby did not seem to be ill. There were no symptoms until 3 days later (May 25), when the child became restless and cried a great deal. He also vomited his food. A physician was called, and the profuse urination being called to her attention, she examined the urine and pronounced the child diabetic. The child became more and more restless, and then dopy, soon going into a coma. Another physician was summoned, and on his advice the infant was sent to St. Mary's Hospital, being admitted there May 26, at 9:15 p. m., after having been in coma for more than 24 hours.

*Physical examination on admission:* Patient was a male child 17 months old, in coma; was very well nourished, weighing about 32 pounds; temperature was 97°F., heart rate 160 beats per minute, respirations 48 per minute. The skin was cool and dry; the eyelids were half closed. The pupils were equal and reacted sluggishly to light. The pharynx was injected. The heart was normal in size and location. The sounds were very rapid and of fairly good muscular quality. There were no murmurs. The lungs were negative. The abdomen was soft, and no organs or abnormal masses could be felt. The extremities were normal. There was no muscular rigidity. Kernig's and Babinski's signs were absent.

*Course of illness:* At 10 p. m. (May 26) the child was catheterized and 3 oz. of urine obtained. This specimen had a specific gravity of 1.033, contained 3.3% glucose, albumin 1+, acetone 2+, and diacetic acid a trace. Microscopic examination showed a great number of finely granular casts—about 25 per low power field. At 10:30 p. m. a specimen of blood was taken from the median basilic vein. (In order to procure the blood it was necessary to cut down on the vein and expose it.) At the same time 10 units of insulin (U20) were given intravenously, and 10 units subcutaneously. Then an enema was given and a rectal drip of normal saline started. There was no noticeable improvement from the insulin. The child was again catheterized, but no urine was obtained. At 11:30 p. m. ten



units more of insulin were given intravenously. There was no improvement. At 12 midnight 10 units of insulin were given intravenously with no change in the symptoms. Catheterization was again tried and was again without result. At 1:30 a. m. (May 27) 10 units of insulin were given subcutaneously. The case was now considered hopeless, on account of the acute kidney complication.

The blood on admission contained 350 mg. of glucose per 100 c.c.; the  $\text{CO}_2$  was 31% by volume; the nonprotein nitrogen was 28 mg. per 100 c.c.; urea nitrogen 17 mg. per 100 c.c.; the uric acid 2 mg. per 100 c.c.

At 7:30 a. m. of May 27, 1925, the infant's temperature rose to  $105^\circ\text{F}$ ., heart rate to 180 beats per minute, and respirations to 44 per minute. The skin was now hot and dry; the general condition much worse, and the coma much deeper, with an occasional convulsive movement. A blood count at this time showed 32,000 white blood cells per cu.mm. Of these, 60% were neutrophils, 30% small lymphocytes, 1% large lymphocytes, 4% large mononuclears, 5% transitionals. Another specimen of blood taken at 10:30 a. m. showed 85 mg. of glucose per 100 c.c.; the  $\text{CO}_2$  was 30% by volume; the nonprotein nitrogen was 30 mg. per 100 c.c.; the urea nitrogen was 18 mg. per 100 c.c.

The child continued to decline and died at 1:20 p. m. (May 27). Autopsy was not obtained.

*Comment:* This report presents a very severe case of diabetes mellitus in an infant aged 17 months. The first symptoms of the disorder (thirst and polyuria) were observed only 6 days before death, the other symptoms supervening rapidly to a fatal termination.

Külz, Stern and Wegeli stressed the importance of heredity, trauma, and previous infectious disease in the etiology of diabetes mellitus in infants and children. In this case

there was nothing to which we could ascribe the onset of the disease. The same observers also noted the presence of many granular casts in the urine, just before and during coma. Granular casts in great numbers were found in the only specimen of urine obtained from this infant. There is no doubt that the products of diabetic intoxication caused so much irritation of the kidneys that they set up an acute nephritis and uremia which was the direct cause of death. This is confirmed by the fact that although the insulin brought the blood sugar down to a normal level, there was not the slightest sign of clinical improvement. Also there was complete anuria during the last 15 hours of the child's life.

Personal observations on the treatment of diabetic coma, both in adults and children, have shown us that we could expect definite improvement in a comparatively short time by the use of large doses of insulin intravenously, provided there was not too much damage to the kidneys and higher nerve centers.

The normal figures obtained for the non-protein nitrogenous constituents of the blood in both examinations is borne out by many observers in acute nephritis, notably by Leopold and Bernhard, who in their investigation concluded that "the nonprotein nitrogenous constituents of the blood were found to be normal in acute nephritis in children, especially at the beginning of the disease."

This paper would be incomplete without a plea for more frequent examinations of the urine in infants and children.

I desire to express my thanks to S. Senn, B. S., biochemist to St. Mary's Hospital, for the urine and blood examinations, and also for his assistance in translating the French and German references in this article. I also desire to express my appreciation to Drs. Talty, O'Grady, Lambert and Ponterey of the House Staff for their great interest and valuable assistance in this case.

## In Memoriam

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Dr. Walter Buckley Johnson died on July 30, 1925, after a lifetime of service to the welfare of his fellow men. People of every sort met in him a response to all their varied interests, and the response was an active one, in accord with the vibrant human energy of his own nature. No man more truly than Dr. Johnson exemplified the maxim: "Humani nihil mihi alienum". Always ready to take part in any good work, he did not turn back from anything he began but, refusing to admit discouragement, infused his own enthusiastic energy into others.

To the medical profession his first and deepest loyalty was naturally given, and to its organized expression, the Medical Society of New Jersey, he gave freely, for many years, thought, time, zeal, and executive ability.

Elected president in 1904, he was, from that time forward, unceasing in his devotion to the society's welfare. Ranking high in his own professional standing, a member of various national organizations relating to his special field of practice, busy with many civic, philanthropic, and patriotic activities, no call from this society ever failed of a ready response from him.

Wherefore, the Medical Society of New Jersey, through its Board of Trustees, resolves that we recognize in Doctor Johnson one more of those loyal servants of humanity who, through the ages, have reflected honor on the medical profession;

And, we further resolve that we can best honor his memory by handing on to the years to come his spirit of devoted service to our brethren, our country, and our fellow men.

Prepared for the Board of Trustees by:

ELIAS J. MARSH  
ORVILLE R. HAGEN  
HENRY O. REIK

(Adopted by the Board of Trustees at a Special Meeting, January 20, 1926.)



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## OPPORTUNITY IS KNOCKING. WILL YOU OPEN THE DOOR?

Within the past 3 months, the Executive Secretary has visited Rotary or Kiwanis Clubs in 13 different counties (24 towns) of this state and addressed the members upon the general topic of "Longer Life Through Better Health". In every instance, without exception, he has found these groups of laymen keenly interested in the message from the state medical profession; a message that has recommended a thorough physical examination of the apparently healthy, followed by periodic reexaminations, and advised that the family physician is the "expert mechanic" who should be engaged to conduct such investigations of the human machinery.

The public is quite alive to the importance of this campaign for increasing the average of longevity, and appreciates the fact that maintenance of perfect health means greater happiness in the daily life. This interest has been manifested in several ways; not only in rapt attention to the speaker and applause of his remarks, but in a general open discussion at some of the meetings and in personal conversations at the close of others. At practically every club visited we have learned that one or more members had already adopted the plan of having such examinations made; at the smallest gathering met with, 27 members present, it was disclosed that 4 of these were enrolled by one examining institution and that one of these 4 had

submitted 4 members of his family to the same health study. It is not meant to imply that such an average would hold elsewhere, but, it happens that this record was obtained in a community where one of the leading physicians had but a short time before assured the secretary that there was no demand for such examinations. It is worthy of note, too, that in several clubs we have met with one or more members complaining either that there is no physician in their community making these examinations, or, worse still, that examinations made had not been satisfactory; i. e., had not been as complete as had been anticipated. Some of these complainants were able to compare the examination received with that given at the time they volunteered for service in the army, and they recognized the fact that the latter had been far more thorough in character.

It is apparent to the secretary that there is a widespread and growing demand for health examinations, that this demand comes from the best educated and most substantial portion of the public, and that in too many districts the family physician is neglecting his opportunity to render such service to his community and to reap the rewards that naturally follow in the wake of performance of duties.

What are we going to do about it? Are we ready to follow the leaders in the profession, and interest ourselves in this new feature of preventive medicine, or will we continue to ignore the demand and make it necessary for these people to seek the services of outside organizations?

### PENDING LEGISLATION.

This year there have been 899 measures introduced into the General Assembly for addition to the laws of this state. Of course, the vast majority of them will not be enacted into law but it is unfortunate that fully 50% of them cannot be at once thrown into the waste basket without further consideration. Studying even a limited portion of the field, the bills affecting practice of the healing art alone, we find an inordinate number of worthless specimens and some few that are really vicious in character.

If we may first refer to the good medical bills presented, we may report that the State Board of Health is responsible for the introduction of 2 worthy bills; A. 170, providing for state-wide vaccination of school children, and A. 267 designed to protect the public against the increasing menace of rabies by requiring the inoculation of all dogs in this state. The Board of Medical Examiners has presented 2 bills intended to further protect the public through providing for revocation of license of any physician or midwife who shall have been convicted of criminal abortion. The Welfare Committee has reintroduced a "Doctor's Title" Bill, A. 247, and has been endeavoring to secure its passage in the hope that a curb may be put upon those who falsely use this designation to deceive the public as to their qualifications.

On the other side of this legislative question, there is a series of bills more or less obnoxious to the medical profession and decidedly dangerous to the community. A. 71 would provide for the appointment of a "naturopath" to the Board of Medical Examiners and for the licensing of members of that newly devised cult. A. 161, is perhaps the most offensive bill yet presented by the chiropractors; it would not only provide for a separate Board of Examiners but would license without examination practically anybody who claimed ever to have practiced chiropractic. A. 366 and 374, introduced by the chiropodists, call for the appointment of one of their number to the Board of Medical Examiners and define practice of chiropody in such broad terms as to make them specialists in all affections of the feet, limiting them only to the extent that they shall not perform am-

putations or tenotomies. A. 457 would confer, without examination, license upon any physician who entered upon practice prior to the year 1894. A. 464, "requires physicians to make out their prescriptions in triplicate form and to state thereon the disease for which the prescription is given". A fine lot of legislation, one might say, and the last mentioned bill reaches the height of absurdity.

That any of this objectionable legislation will actually be placed upon the Statutes is highly improbable but it requires careful and constant watching, and the influence of every member of the State Society should be brought to bear upon members of the General Assembly to prevent the accidental passage of such laws.

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### MAUDLIN SENTIMENT AND RABIES.

Many self-styled "dog lovers" insist that the disease rabies does not exist, claiming that the agitation to protect society from the disease by the vaccination of dogs is stimulated by manufacturers of biologic products. They revolt against any proposed restrictive measures, and when antirabies vaccination of their dogs is suggested their opposition knows no bounds. Against the illogical reasoning and unsocial conduct of the "dog lovers", we have the facts presented by Dr. Costill elsewhere in this issue.

Rabies in dogs is a menace to public health. It costs unnecessary suffering and death, and it can be entirely prevented if we so will it. The legal measures upon which all preventive work must be based are covered in a bill now before the Legislature, and this bill should receive the hearty endorsement and support of every physician in the State. It will be opposed by the noisy minority, who insist that their dogs be allowed to bite whenever, and whomever, they will without molestation. This means as well that these dogs, if they become rabid, shall be permitted to transmit the disease.

We can expect a storm of protest from those, in some cases sincere, but always misguided people. Society has the right to demand of the intelligent majority that it shall make its wishes known to the Legislature. Physicians cannot afford to dodge this responsibility.



## Esthetics

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About this season of the year the busy physician or surgeon begins to weary somewhat of the grind of monotonous labor and to wish for some radical change in the daily routine, if only for a single day. The exigencies of practice, the exposure to inclement weather conditions, the difficulty of collecting earned remunerations and the appalling demands of the landlord and the coal-dealer; all these things, steadily increasing during the winter months, tend to get on one's nerves and some diversion is essential to recovery of normal stability. The wise man endeavors to maintain a balance between labor, recreation and rest. Some balancing of the strenuous practicalities of life by the poetic influences is necessary to maintenance of sane equilibrium. Among the recreations available to the active practitioner, one that is most gratifying in its soothing effects, and one that requires the least expenditure of time, exertion or money, is the enjoyment of art exhibits and it so happens that at this particular moment there are several very interesting and instructive exhibitions within easy reach of most of our members. We cannot all afford either the time or money for a prolonged midwinter vacation but most of us can afford 1 or 2 days, at least we can afford a few hours, for a visit to New York or to Philadelphia according as we chance to be living in the northern or southern part of this state.

Both New York City and Philadelphia offer attractive art programs for the month of March. At the New York Academy of Art and Design and at the Philadelphia Academy of Fine Arts the usual annual "Salon"—exhibitions of the past year's best products in sculpture and in oil paintings—are being held. Both exhibitions are worth a visit if for no other reason than that they present for consideration the best and the most recent work of the American artists of our own day.

In a previous article we called attention to the ever present but ever changing art displays in the Galleries at the Grand Central Terminal and advised those who have an hour to spare, or an hour perforce to wait in that railroad station, to spend it in the Gallery. During the 2 weeks commencing March 6 and ending March 20, there will be a special exhibit in that Gallery which will certainly repay one for

a planned visit. The Carnegie International Art Show, so successfully conducted for the past year at Pittsburgh, and which includes selected paintings by the masters of 13 different nations, will be shown in New York for the first time. This is the most favorable opportunity we are likely to have to see this special collection and those who have not already had the privilege of studying the complete collection at Pittsburgh should avail themselves of the chance to see this portion of it.

Even a more fascinating exhibition, however, for the lover of art in general, is now open for those who can conveniently visit Philadelphia. The famous McIllhenny collection of paintings, sculpture, furniture and rugs is now open to the public in Memorial Hall of the Pennsylvania Museum, in Fairmount Park. An extremely interesting description of this collection may be found in the Philadelphia Public Ledger of Sunday, February 28, and from that we quote merely the generalized introduction, as indicating some unique features of this exhibition: "In art appeal it is gentle and livable, not strikingly new or bold, and when one may thus see before him a panorama of the centuries it seems not at all a far cry from those early years to the present time. Thus may works of art live together as brethren, and thus may the mind and taste of the individual collector remind us that years provide but artificial barriers in the timeless realm of art. This subtle blending of the art of the centuries, although so strongly indicated in the character of the McIllhenny acquisitions, has been carried out by the Museum in the method of display. The paintings, the furniture, the rugs, and the bits of sculpture are shown as associated with one another, and not as isolated specimens of an arbitrary period."

Especially interesting for those who did not enjoy the privilege of a vacation in Paris last summer should be the fact that a large section of the Exposition of Decorative Arts has been brought to New York and may be seen during the first 3 weeks of March at the Metropolitan Museum on Fifth Avenue. Whatever is thought of the style or of the individual items represented, no one can escape the dominating impression of a singular unity and great mastery of materials and processes. As described in the New York Times; "Here are weavings, woodwork, ironwork, glass, silver, embroidery, ceramics, lace, paper, paintings, sculpture—all united in a species of inner harmony, dependent upon no one feature or character appearing in otherwise various objects, but upon a way of thinking that has influenced everything."

## Medical Economics

### WAKE UP, MR PRACTITIONER!

In this column last month it was suggested that, in the present furor over health examinations—a furor in which everyone seems to be joining except the men who should be making the examinations, and are not—the one thing needful to meet the demand is men who are capable *and willing* to make a careful physical examination of the apparently healthy. It was ventured further that the average general practitioner, by virtue of his college and hospital training, is quite capable of the task but that in the beginning he was taught little or nothing of the need for it, or of the interest that might be found therein; that nothing was done to develop in him a desire to do this type of work; and that his life, subsequent to his curricular studies, tended in every way to lead him away rather than toward it. The fault, and fault there certainly is, lies more fundamentally at the door of the Medical College than at the practitioner's.

Be this as it may, correction of the college curriculum merely looks to a distant, uncertain future. There is an immediate urgent demand, and if the practitioner does not meet it fairly, but rests quiescent on the assumption of a school problem solely, he is shirking an obvious and present responsibility. He is morally and professionally obliged to make what effort he may to correct the present state of affairs.

Admit he has not been taught that this is an important part of his job; suppose nothing much in his life since his student days has happened to arouse his interest; admit again that his method and habit of life do not lend themselves easily to giving up the time needful; nevertheless, the general practitioner must see that a situation confronts him which must be met by some one, and that it is by long odds to his best interest to handle it himself rather than have it taken over by some other agency.

There is a growing demand from the public for health examinations. Ample proof has been offered that such examinations are a highly conservative thing. Someone must supply this need, and the logical man to do so is the general practitioner. His public know him, and what is more to the point, he knows them and their family tendencies as is possible for no one else. A careful examination at his hands is of far more value than one at the hands of an entire stranger. A tongue depressor and stethoscope, backed by capable eyes, ears, and fing-

ers, and an intelligent brain, are the principal factors in the paraphernalia required; and these the practitioner possesses and knows well how to use. If he will but admit his responsibility and take hold of his work, he will perform it in the long run much better than it can be done by institutes and other organizations whose interest can hardly avoid in time becoming commercial and perfunctory.

If it is hard to find the time for such work—and it does take time—one office period a week might be set aside for it; and 2 or 3 patients cared for each week in this thorough manner would soon make the practitioner feel the time was not ill spent. From the financial angle there is some inducement, for certainly \$10. ought to be the minimum fee for such service, and in some localities and from some patients more than that might fairly be asked. Only by placing any service on an adequate financial basis can it be made satisfactory both to patient and physician.

Much that is interesting crops up in the course of these examinations of the apparently healthy. The present generation of physicians, almost to a man, served during the World War, either in the army or on draft boards. They uncovered many unsuspected defects and kept a large number of men from military service, many of whom had felt entirely confident of their physical capacity to serve until they failed to measure up to the moderate standard of fitness which the army required. These applicants for military service were men in their twenties and thirties, yet a large proportion revealed defects. The present demand is from patients at least a decade further along, who are nearing or actually in middle life. Degenerative change in the cardiovascular system is the great bane of the fifties and sixties, and its origin may often be traced to the fourth and fifth decades. Therefore, an intensive study of the apparently healthy between 30 and 50 years of age must well repay by revealing, in course of time, some knowledge of the forerunners of these disabling myocardial and arterial lesions of a later period. Early signs and symptoms, bad hygienic habits and mode of life are to be sought for, recorded, and, so far as may be, corrected. It is an occupation full of interest to the man with an inquiring bent; and the more of it he does the greater will become his satisfaction in his work as a whole.

The common fault of health examinations, as they are done at institutes and by insurance companies, is the inattention to the patient's history. This is a serious failing. Too often the patient's statement that he feels all right and has not a thing the matter with him is ac-



cepted at par. Inquiry need not be long, but it should seek a statement of all past illness, operations, trauma; then a routine query as to digestive function, respiratory tract, cardiac and urinary organs, as well as habit of life, hours of sleep, hours of work, amount, frequency and type of recreation, use of alcohol, tobacco, tea and coffee. This need not take long if the examiner pursues his research in a systematic manner and knows beforehand just what questions he wants to ask to cover the necessary ground.

There follows then an equally methodical physical examination embodying at least the following points: height and weight; general appearance (of good or poor health, erect or poor posture, musculature, adipose tendency, pallor, dyspnea and cyanosis, color and texture of skin); eyes, ears, nose, mouth (tongue, teeth, pharynx and tonsils); superficial lymphatics; thyroid; chest, (symmetry and expansion); lungs; heart, (position of apex, area of dullness, rate rhythm, character of sounds); pulse and blood pressure; abdomen, (symmetry, distention, tenderness, rigidity, masses); liver, spleen and kidneys; inguinal rings; extremities, (deformity, tremor, edema, knee jerks). To this may be added at discretion of the examiner, in the case of men, external genitals and rectal findings; and in women pelvic organs.

There is no essential need of printed forms. It is better for some of us, at least, to have the routine questionnaire and physical condition in one's mind and record the findings on a blank sheet. This allows for expansion and contraction which a printed form does not, permits variations to suit the individual case, and is more elastic and economic of space. To carry out such an examination, from 30 to 60 minutes will be required; the average will be about 45 minutes.

Variants of such a scheme may be employed to suit the taste of the examiner and the exigencies of the special case; but some *definite plan* is necessary to *begin* with, and this is merely suggested as a rough outline.

The *essential* thing is that there is a definite problem confronting the profession. It has been put forward by the public. Some of the future aspects of its solution lie in the medical schools. The immediate and pressing demand is for activity from the men now doing general practice.

Are we going to wake up and meet it?

According to a naturalist, there is a fish which washes its young. But how ever is the little one dried?—Ideas.

## Current Events.

**A Referendum Requested by the Board of Trustees: Shall the Structural Form of this Board be Retained as at Present Provided for by the Constitution or Shall Provision be made for its Modification?**

The Editor is in receipt of a communication from the Secretary of the Board of Trustees of the Medical Society of New Jersey requesting publication of a letter just issued to the officers of the component county medical societies, which letter is presented in full below. As will be noted, the letter constitutes a referendum and it is presumed the subject matter will be presented to every county society for discussion between now and the time for the annual meeting of the State Society. Its publication in the Journal now is for the purpose of providing every member with a full statement of the problem, and of thus affording every member throughout the state an opportunity to study the question in advance of these local meetings, so that he may be prepared to express his opinion when occasion offers. Alterations in the fundamental laws of any organization, especially one as old as and that has functioned as well as this one, should be made only after mature deliberation and in response to a pronounced demand on the part of a considerable majority of all the members. It would be well to give this question your careful consideration. The letter follows:

Westville, New Jersey,  
February 22, 1926.

To Presidents and Secretaries  
of County Medical Societies.  
Dear Doctor:

At a recent meeting of the Board of Trustees I was instructed to inform the members of the State Medical Society, officially through the officers of the county branches, of the present status of certain criticisms of the basic principles of our organization, and to request that these questions be considered and acted upon by the county societies so that their delegates to the next annual meeting may be prepared to deal with proposed amendments to our Constitution that must come up for action at that time.

You will remember that at the last annual meeting of the State Society Dr. Quigley proposed an amendment to the Constitution (see Transactions of the Annual Meeting, supplement to the August Journal, pages 30 and 61) which reads as follows: "The Board of Trustees shall be the executive body of the Society and shall be composed of 15 members. The President, the three Vice-Presidents, the Recording Secretary and the Treasurer shall be members of the Board of Trustees by virtue of office. Nine members shall be elected by the House of Delegates at the Annual Meeting of the Society in 1926, three for a term of three years, three for a term of two years, and three for a term of one year. At every Annual Meeting thereafter, the House of Delegates shall elect three members for terms of three years".

If we understand the situation properly, Dr. Quigley's suggestion that the Constitution be altered grew out of a feeling on the part of some members that the Board of Trustees, as that body is at present provided for, constitutes a "close corporation" dominated by the "Fellows" and has a membership that is not selected on a basis of democratic organization.

Following Dr. Quigley's presentation of the

matter in the House of Delegates, the Board of Trustees, at its next regular meeting, took cognizance of this subject, Dr. Eagleton presenting a recommendation that Fellows should not serve on the Nominating Committee, and that the Board should immediately consider plans for reconstructing the Board of Trustees with the idea of making it a more democratic body but realizing the value to the association of those members who have served through the chairs. After discussion of these points, the Board adopted a resolution offered by Dr. Morrison that "the Board of Trustees recommend that the Fellows, as such, shall have but one representative on the Nominating Committee and that he shall be the junior past President". This resolution was later accepted and adopted by the House of Delegates. With reference to the second portion of Dr. Eagleton's suggestion, the Board appointed a special committee to consider the problem and report at a subsequent meeting; the committee consisting of Drs. Eagleton, Ill, and Hunter.

On January 20, 1926, the Trustees held a special meeting to receive the report of this committee and at that time Dr. Eagleton proposed the following scheme for reorganization of the Board of Trustees: "The Board of Trustees shall consist of twenty-eight members, (as now constituted). Seven officers by virtue of their office. Five representatives of Judicial Districts to be elected as representatives of the Permanent Delegates. Six representatives of the Fellows to serve for the term of five years each. Any of the ten Delegates at large may be Fellows if they are chosen by the House of Delegates".

In the course of discussion, Dr. Morrison presented as a substitute, the following plan: "The Board of Trustees shall consist of twenty-seven members, as follows: The seven officers by virtue of their offices, the President, the Vice-President, the second Vice-President, the third Vice-President, the Treasurer, the Corresponding Secretary, and the Recording Secretary. Ten members to be elected by the House of Delegates, no two from any one county society, to serve for a period of five years, two retiring each year. Ten members from the Fellows, being the last ten elevated to that office, the senior Fellow, in terms of office as a Trustee, to retire each year. Any other Fellow may be elected to the Board by the House of Delegates as one of their ten representatives on the Board".

The Trustees discussed this entire problem, including the question whether or not there is any necessity for, or any serious demand for a change from existing conditions which have worked so well, for so many years, and it was decided to present the problem to the county societies in the form of a referendum. You are therefore, respectfully requested to submit to the members of your Society the following propositions, accompanied by presentation of the above explanation, so that action may be taken preparatory to consideration of the Quigley amendment when it comes up at the next Annual Meeting of the State Society:

(1) Are you satisfied with existing conditions as to the constitutional provision for organization of the Board of Trustees?

(2) Do you wish to make any change in the construction of the Board or in the manner of its election or appointment?

(3) If you desire a change, will you please indicate which of the three plans hereinbefore described would be preferable, or, will you submit some other plan?

As already explained, this matter will necessarily come up for consideration by the House of Delegates at the next Annual Meeting of the State Society and this is merely a request that your Delegates be instructed or be informed and advised concerning the wishes of your members in this matter. There is no requirement that you shall report to the Board of Trustees, but, as the Secretary of that body, I shall be pleased to confer with you at any time about any points not made clear in this letter, and will appreciate it as a courtesy if you will keep me informed concerning any action taken by your Society so that I may be in a position to inform the Trustees.

Very truly yours,

James Hunter, Jr., Secretary.

#### The State Association's Obligation to the County Society.

At the recent conference of State Society Secretaries, held at Chicago under the auspices of the American Medical Association, Dr. J. Bennett Morrison addressed the gathering upon the subject embraced in the above title. It is impossible to reproduce at the moment his entire speech but we are glad to present in summarized form the principal headings under which he spoke, and which will fairly well indicate the important points he made.

(1) It is a matter of prime importance to elect aggressive and progressive State Society officers; men who are not merely themselves honored by this distinction but who will reflect credit upon the organization and who will labor actively in promoting the interests of the entire membership.

(2) Officers should visit the component societies, and by personal visitation carry to each county society a discussion of all the important problems confronting the profession, and participate in the solution of these problems. When state legislation is to be proposed, or when it is pending, it is just as important to discuss such matters with the local organizations as to present the propositions at the Annual State Society meeting.

(3) Postgraduate extension work should be urged upon the county societies and the best forms of such studies for the different localities considered so that the advantages may be made available to as many members as possible.

(4) Gathering of historical data and preservation of papers, books, records, instruments, and property of all sorts should be encouraged for the honor of the community and the glory of the whole profession. A permanent home for the conservation of such material should be the pride of each state, even of each county.

(5) Wherever possible, the State Society should provide for the services of an Executive Secretary who will spend every moment of every day in thought and study concerning such matters of interest and importance as affect all the members of the profession in the state; the problems of the State Society embrace those of the various county societies.

(6) The State Society officers should see to it that only active members are appointed or elected to all committees, and should then insist upon such committees functioning effectively.

(7) When important business is anticipated as coming before the State Society, the officers should endeavor to use the referendum in some form so as to gather in opinions from all quarters.

(8) The State Medical Journal should be



made one of the very best of state journals published; if it is of the right type and is maintained upon a high standard, it will be read by the members in advance of any other of their periodicals.

(9) Provision should be made to safeguard all members by securing to them the means of procuring adequate Indemnity Insurance at the lowest cost compatible with safety.

(10) Efforts should be made to promote close coöperation between the State Society and various organizations related to medical matters—the State Board of Health, Board of Medical Licensure, Board of Education, and lay bodies concerned with health problems.

### THE DANGER OF RABIES TO PUBLIC HEALTH.

Henry B. Costill, M.D., Director,  
New Jersey State Department of Health.

The importance to which rabies has developed as a public health problem in New Jersey is indicated by the following statistics: during the past 3 years (1923-25) the diagnostic laboratories in the state have demonstrated the presence of rabies in more than 575 dogs; more than 550 persons have been given the Pasteur treatment at public expense; and 10 persons—all but 2 of them children—have died of rabies. We know that many rabid animals are killed and disposed of without a laboratory examination of the brain, and, hence, that the 575 known rabid animals is but a fraction of the total. We are equally aware that many persons bitten by rabid dogs are treated at their own expense, and no record is available of the number which should be added to those known to have undergone the Pasteur treatment. Of these 10 persons who died, the record of 1 is lost and we do not know whether or not he was treated; 3 did not receive Pasteur treatment; and, of the remaining 6, 2 began treatment 5 or 6 days after being bitten, in spite of the fact that 1 of them was bitten about the face. The other 4 were treated promptly, but died in spite of the Pasteur treatment.

Rabies is a menace to the state, and can be wiped out by rigidly enforced control measures, but there is at this time no law to serve as the basis for control. Therefore, the State Department of Health had introduced into the Legislature a Bill which provides that every owner or keeper of a dog shall apply for a dog license, at which time the owner shall file a certificate of anti-rabies vaccination, or in lieu of such a certificate the owner or keeper must satisfy the issuing officer that the dog will be effectively muzzled when running at large; under these conditions a dog license shall be issued. The registration fee is fixed at \$1.00 for male and \$3.00 for a female dog. The bill provides for kennel licenses; the seizure, redemption, and disposal of stray dogs; and the canvass of dog owners.

This bill has been reported favorably by the committee to which it was assigned, and should receive the hearty support of the medical profession and other persons interested in the protection of public health. The proposed law is sound in principle and practical. We know that anti-rabies vaccination will protect the dog against rabies. For instance, the City of Orange enforced an ordinance requiring vaccination, and more than 900 dogs were inoculated. During the year 1924, there occurred 7 cases of rabies among unvaccinated, stray dogs, and none among the vaccinated dogs. During the year 1925, one dog developed rabies which had been vaccinated 10

months previously. This is the only case in New Jersey in which a vaccinated dog is known to have contracted the disease and in no way vitiates the statement that the vaccination does protect, for we know that no protective measure is ever 100% perfect. Rabid dogs are known to have bitten other vaccinated dogs in Orange during the year and, with this one exception, they did not develop the disease.

In West Orange, which has a similar ordinance, 2000 dogs have been vaccinated, at least a half dozen of which were bitten by known rabid dogs and did not develop the disease. Other non-immunized dogs bitten by the same rabid animals died of rabies. In Englewood and Montclair, ordinances requiring the vaccination or muzzling of all dogs have resulted in the vaccination of a large, but unknown, number of animals. Here too, vaccinated dogs are known to have been bitten by rabid dogs, and none have developed the disease.

This New Jersey evidence conforms to that of preventive measures adopted in other states, such as Connecticut, and in foreign countries, such as Japan. The evidence is reviewed at length by Mulcahy (Mulcahy, John V.: Experience with Canine Anti-Rabies Vaccine. Public Health News, New Jersey State Department of Health, 9:1, Dec., 1925), and physicians who wish to have at their command the facts in regard to prevention of rabies among dogs should reread this valuable paper.

Important as it is that cities adopt ordinances to control the spread of this disease, no city can protect itself entirely, because stray dogs from unprotected areas inevitably will enter and attack residents. The solution is the enactment of a state law so that the more backward communities can be coerced into carrying out the necessary protective measures.

## Communications.

### A VISIT TO THE CLEVELAND CLINIC (CRILE'S) HOSPITAL.

(Letter from John Hammond Bradshaw, M.D.,  
F.A.C.S., Orange, N. J.)

The Cleveland Clinic Hospital has only been in operation 18 months. The organization consists of the "Clinic" and the Hospital proper; separate buildings on different but adjacent streets. The former is run on lines similar to the Mayo Clinic and reminded me very much of that organization, being housed in a large many storied building with offices and registration bureau on the ground floor and a multitude of rooms, reached by elevators, for special examination and experimentation on the floors above. One is at once impressed with the great efficiency and exactitude of all its appointments. Patients come to the clinic first and receive the requisite examination and then appointment and assignment for hospital research or operation; it is surgical efficiency brought to the nth degree!

"The Cleveland Clinic Hospital" needs a few words of description. It is an 8 story steel, brick and concrete structure which cost about \$1,000,000.00. Five floors accommodate from 30 to 40 patients each. The conception of constructing it in such a manner that each and every room is an operating room seemed to me highly original. The rooms accommodate 1, 2, or in a few instances 4 beds, and have wide doorways (44

inches) with windows intentionally placed directly in front of the doors in order to give direct circulation of fresh air; avoiding stale air pockets and assuring absolute freedom from hospital odors. In fact, the air seemed to me as sweet and fresh as the out of doors atmosphere. Hard-finished walls painted in pleasantly shaded enamel paint gave the rooms, even when vacant, almost a furnished look. The halls were floored with tarrazzo, with the exception of a central 30-inch strip of softly colored rubber tiling extending the whole length of each corridor, and affording a velvety soundless tread.

There are several regulation operating rooms on the top floor where all the sterilizing outfit is located. These rooms are used by Dr. Crile for all but goiter cases. His basic idea in goiter cases is to relieve the patient of the necessity, anxiety, distress and danger of leaving her room or bed or even knowing that an operation is due, impending or even immediately to be performed. A dozen or more ward carriages on roller bearings, loaded with sterilized instrument and dressing trays for every operation, are here prepared for instant call; and before and after leaving this floor for their journey to the designated spot are kept covered with layers of sterilized sheeting.

Operations begin at 8 a. m. The visiting surgeons were given a typed list of the days operations. A copy of the list given out the day I was there follows:

**Cleveland Clinic Hospital,  
Schedule of Operations.**

Date, Jan. 19, 1926.

	Time.	Room.	Operation.
<b>Dr. Crile.</b>			
1	8:00	616	Lobectomy or closure.
2	8:15	610	Lobectomy or closure.
3	8:30	526	Lobectomy.
4	8:45	530	Thyroidectomy.
5	9:00	429	Lobectomy or closure.
6	9:15	410	Thyroidectomy.
7	9:30	404	Thyroidectomy.
8	9:45	432	Lobectomy.
9	10:00	410	Ligation.
10	10:10	412	Thyroidectomy.
11	10:25	302	Lobectomy.
12	10:40	307	Lobectomy.
13	10:55	310	Lobectomy.
14	11:10	312	Lobectomy.
15	11:25	322	Lobectomy.
16	11:40	325	Lobectomy.
17	11:55	328	Thyroidectomy.
18	12:10	210	Lobectomy.
19	12:25	210	Thyroidectomy.
20	12:40	218	Thyroidectomy.
21	12:55	218	Thyroidectomy.
22	1:00	228	Ligation.
23	1:10	229	Lobectomy.
24	1:25	630	Laparotomy.
25	2:00	432	Laparotomy.
<b>Dr. Lower.</b>			
26	8:00	314	Bladder tumor resection.
<b>Dr. Jones.</b>			
27	9:00	Ther	D. & C. Radium fibroids.
28	9:15	Ther	D. & C. Radium.
29	9:30	Ther	Exc. Plasmocytoma neck; rectal anesthesia.
<b>Dr. Waugh.</b>			
30	10:30	TCI	Tonsillectomy.
<b>Dr. Dinsmore.</b>			
31	2:00	528	Thyroidectomy.

As one takes up the paper, he involuntarily gasps to find under Dr. Crile's name a program of 25 operations slated at about 15 minutes headway each for the morning. But the impossible becomes possible as the technic and perfect teamwork develop. Thyroid cases are prepared for the requisite number of days by the following treatment: Lugol solution routine; only typical exophthalmic cases to be put on, as follows:

- (1) Digitalis p.r.n.
- (2) Lugol 15 min., t.i.d., until day of operation.
- (3) Immediately after operation, Lugol 3 c.c. in milk by rectum.
- (4) Lugol 15 min. by mouth afternoon of operation or 2 c.c. by rectum at 6 p.m.
- (5) Day following operation patient to get 15 min. of Lugol, and this repeated daily for period of 3 days.

Articles required for Thyroidectomy:

- 1 Adhesive strip with bandages.
- 2 Plain adhesive strips.
- 1 pillow with rubber slip.
- 2 bed blocks.
- 2 knee straps.
- 1 goiter roll.
- 2 foot stools.
- 1 ice compress.
- Crile light.
- Scrub with ether, iodine and alcohol.
- Hypodermoclysis.
- Rubber draw sheet to head of bed.

Patients do not receive breakfast. A liquid breakfast is served only to patients whose operation is scheduled for later than 12 o'clock. The regular breakfast hour is between 8:30 and 9:30, a. m., a little later than is usual in hospitals, so that quite a number of operations are finished before the breakfast hour.

Morphin and atopin are given routinely before operation; by the mouth generally. As local anesthesia is the chief dependancy and only a whiff or so of gas and oxygen is used off and on there is no time lost in getting the patient "under". The gas and oxygen for anesthesia are manufactured in the hospital, stored in tanks in the basement, and piped to the operating rooms and bed rooms. This reduces the expense of gas and oxygen about 50%.

At no time during those thyroidectomies I witnessed did the patient fail to respond to questions asked during performance of the operation. Dr. Crile operates with 2 assistants and 2 nurses. One assistant is the artery clamp man and the other the "retractor". A marvelously efficient instrument nurse, using the sheet covered abdomen and legs of the patient as her chief table, slaps with decided audition and with great rapidity, each artery clamp into the extended hand of the first assistant. As Dr. Crile cuts more than he dissects (with but little blunt divisional work) the snap, snap, snap of each successive clamp into the assistants hand follows in succession almost like the tick of the clock, for in 5 minutes time 5 dozen clamps are likely to be applied. I was at first surprised (afterwards I applauded) at the usual amount of force used for traction on the glandular lobes, but Dr. Crile always avoided traction on the trachea by provisional mesial incision of the gland structure. I repeat, I applauded as I could see how by so doing not only was the extraction greatly facilitat-



ed but safety was enhanced by this traction and pulling the gland away from important structures such as vessels and nerves. It rarely took longer than 5 to 10 minutes for removal of the gland. Sometimes Dr. Crile would begin and finish each case, but often he would leave the wound to be closed by his highly trained assistants and rapidly go to the intermediate room, change his gloves and gown and go to the next case that was ready (the skin and muscular incisions having been perhaps already made), for the removal of the growth itself. As half a dozen or so cases were kept in the preparatory stage at one time, there was great economy of time. Sometimes the several operation rooms (i.e., the patient's bedroom) were on the same floor, and sometimes we took the elevator to the next upper or lower floor.

I want to get this little point "over the top". I do not believe this unusual rapidity but safety of work could be possible if it were not for the "Crile Lamp". Now, this is an absurdly inexpensive article. It consists of an ordinary Mazda lamp on a stick! This stick is, say 30 inches long, a little larger than a curtain roller. It is made of a hollow broom stick painted with enamel. The lamp cord is passed through the hollow of the stick. The lamp painted on two-thirds of its surface, is coated first with quicksilver and then painted dark green and is held, wrapped in a sterile towel, by the only second operating nurse in the room, who stands on a stool above the patient's head and by holding one end of the long stick is herself out of the way but is able to give mobile illumination and that with absolutely no interference nor glare to the operator, an intense and most satisfactory light projected into any and every part of the wound; thus at the expense of a few cents is furnished an operating lamp that not only is able to be taken anywhere at any time (out of doors as well as indoors, closet or bed-chamber), but is by actual working demonstration better in many cases than the \$500. or \$1000. operating room illuminants it has been my experience to witness in use. In fact, I take off my hat (vulgarily speaking) to the man who can simplify this great problem of the operating room in such a striking and indisputable way. To see is to believe. It has almost scrapped the expensive operating room overhead illumination (for it is just as effective when sunlight is striking the sheets as at night). Overhead light is not the only problem solved.

I know little of the management of this hospital. I have never seen a report but I do know that everyone, including Dr. Crile, is whole-time and on a salary basis—this includes the 37 (or more) internes and clinical assistants; 60 registered nurses are constantly employed and an average of about 90 "special" nurses. A "special" is used on any case when necessary. The patients pay for the operation from \$100. to \$10,000. The fee for operation is fixed before admission, by a secretary in the clinic. It is regulated according to the patient's income, number of dependents, and so forth. Free work is done in some instances. They pay from \$6. to \$16. for board and rooms per day. The average time in the hospital after the operation is from 1 to 2 weeks, and the mortality in 5246 cases a year has been only 0.8%.

This institution is self-supporting and is not run for profit. Any surplus receipts, that is, after all expenses are paid, would cause a reduction of rates to the patients.

Now can you, in this efficient world, find the equal of the Cleveland (Crile) Clinic?

## SPECIAL LETTER FROM DR. MACALISTER, REPORTING PROCEEDINGS OF ANNUAL CONGRESS ON MEDICAL EDUCATION.

The Annual Congress on Medical Education and Medical Licensure held in Chicago on February 15, 16 and 17, 1926, was especially notable for the discussion on shortening the medical course, protecting the public from inferior practitioners and the uniform opinion of the value of the hospital interne year. No suggestions were made in regard to further increasing entrance requirements into medical colleges. The training of a sufficient number of well trained physicians to meet the need was realized.

Dr. A. D. Bevan, Chairman of the Council of Medical Education, welcomed the delegates and said that medical schools must be developed on broader lines. Proper medical education is costly and hospital facilities should be developed at the expense of the community, as the community profits both by having its sick properly cared for and also by the proper training of physicians. The faculty of a medical college should be medical men in close touch with the actual needs of the practice of medicine. Anatomy and physiology should be taught from viewpoint of actual medical usefulness. Adequate salaries for faculty and broadly trained men for heads of department are imperative.

Dr. Wilbur, of Stanford University, said it was possible to keep sufficiently accurate time for all practical purposes with a small and inexpensive watch and that it was possible to properly educate physicians with a less extensive endowment than recommended by Dr. Bevan; the real problem consisting in finding suitable men for the instruction of the medical student and later the carrying out of proved scientific principles to the cure and alleviation of disease. Only one-half of the students in the University of Illinois were vaccinated at the time of the recent small-pox epidemic. This was inexcusable as the virtue of small-pox vaccine was definitely established many years ago.

Dr. William Pepper, of the University of Pennsylvania, said that about 40 students each year were admitted to his third year class from the two year medical colleges and this was the maximum number that could be properly accommodated. The University of Pennsylvania is unable to admit all of the students who take their pre-medical training in the University of Pennsylvania.

Dr. K. P. B. Bonner, Secretary of the North Carolina Board of Medical Examiners, stated that 11 states required 4 courses of instruction to be given in 4 different college years. Two states specify that a minimum of 40 months of actual instruction shall have been taken. Sixteen state laws make no mention of the time required for securing a medical degree.

Dr. Walter L. Bierring, Secretary of the Federation of State Medical Boards of the United States, insisted that more practical training is needed. The Deans of Medical Colleges should be in intimate contact with State Examining Boards and the Examining Boards should frequently inspect the various colleges and courses in study. By coöperation between the faculty and the State Board much can be accomplished.

The important problem of saving time in education of the medical student was ably discussed by Dr. Charles H. Judd, head of the Department

of Education, University of Chicago. He outlined a plan of shortening the time necessary for the work of the first 8 grades and said that if suitable books were written with this plan in view the average boy or girl could easily complete the work of the first 8 grades in 6 years. Each year finds the elementary student doing more advanced work in the corresponding grades. The study of algebra and foreign languages are often begun in the fifth grade.

Dr. Wilbur said that the standard medical course could be completed within a total of 40 months by shortening the length of the college vacations and working under the Quarter System (4 terms of 12 weeks each per calendar year.) He did not strongly advise shortening the elementary years from 8 to 6, as the time factor is very important in the development of the child. The work of the Junior High School naturally assists in developing the student. It is not to be expected that standard education programs will be disturbed for the benefit of the comparatively small proportion of students entering the medical schools. The development in medicine is dependent upon the training given in science and the application of science to medicine.

Dr. Henry Christian, of Harvard Medical School, presented a paper on "The Selection of a Hospital for Intern Training". After discussing the relative value of a rotating service and one consisting largely of surgical or medical work, he stated that a service largely of medical or surgical work is to be preferred to a rotating service of less than 18 months.

The number of beds in a hospital or the character of equipment is not suitable criteria for selecting a hospital for internship. The use of the clinical material and the character of the instruction is of greater value. One patient well studied is much more beneficial to the student than a large amount of routine work. The best index for selecting a hospital is on the basis of the proportion of autopsies secured. Any hospital where less than 25% of the deaths come to the autopsy table is not a suitable hospital for internship. When each patient in a hospital has been properly studied the great values of the instruction can only be obtained by post-mortem examination. A list of hospitals was given showing this proportion. Johns Hopkins with 93% was highest; Mayo Clinic, 98%; Presbyterian Hospital, Chicago, 62%; Mt. Sinai, N. Y., 61%; Jefferson, Philadelphia, 38%, and Boston Homeopathic Hospital, 35%; are some of the hospitals listed.

Dr. Guy Connor, Secretary of the State Board of Michigan, discussed the admission of foreign medical graduates to licensure examinations. The Medical hurdles are plenty high for practical selection of those competent to practice medicine but when one plank is taken and put on top to raise requirements, frequently that plank is taken from the bottom and the incompetent man slips under and begins the practice of medicine. An extra year of medical work in a first class medical school should be required before any foreign physician is permitted to be examined for licensure. It is most difficult to obtain satisfactory evidences from many medical colleges in Europe and it is doubtful if any graduates from medical colleges other than England and France should be considered. The plan of having each foreign graduate satisfactorily complete the senior year in one of our good medical schools was recommended. Several of the delegates commented favorably on this plan and in addition

advised American citizenship before being licensed to practice medicine. The State of New Jersey also requires that the candidates pass the State examinations in English.

Dr. Robert L. Rowley, Secretary Medical Examining Board of Connecticut, presented a paper on "Medical Legislation in Connecticut". The new Connecticut law is modeled after the Wisconsin Law and aims to set up the required machinery to insure proper education of physicians without any discrimination against any system of therapeutics.

Dr. T. C. Waite, who has made a very thorough investigation of the deplorable medical conditions in the states of Missouri and Connecticut, presented in great detail some of the nefarious methods used in securing licenses to practice medicine.

Dr. Don. H. Griswold, Commissioner of Health of the State of Iowa, presented a splendid argument for "The Annual Registration of Physicians". In Iowa, about 10,700 physicians have been licensed since the first law went into effect in 1886. One year of internship was demanded in 1919 and only graduates of Class A medical colleges are examined. In 1906, available lists indicated that there were about 5000 physicians licensed, practicing in Iowa and that the death rate was larger than the applicants for licensure. One low grade cult school in the State of Iowa graduated 3000 students in a single year and it was estimated that the number of licensed physicians was only about three-fifths of the total number practicing medicine. The Annual Registration Law of Iowa requires a fee of one dollar per year from each licensed physician. The official list of licensed physicians is sent to each prosecuting attorney of each county and the same list sent to each County Medical Society. Great benefit to the public and to the physicians themselves results from this plan.

Dr. Stuart, of the Missouri State Board, in discussing Dr. Waite's paper, said that drastic changes have been made in Missouri and that state is no longer the "Show Me State". The transformation that has been made entitles it to now be called, "The Show You State".

Dr. Wilbur delivered a forceful address on "Health—A Business Asset", before the Chicago Association of Commerce. He said in part that "The most useful knowledge is Health Knowledge. We must observe the laws of nature. Although many animals and plants have been domesticated yet no legislation can prevent the working of a natural law. California recently passed a law defining the symptoms a cow suffering from tuberculosis must have. Neither the cow nor the tubercle bacillus observes this law. If any city would put into practice and observe the known laws of health that city would soon surpass all other cities.

### Supply and Demand.

Two cracker-box philosophers at Bangs Corners were lamenting the times.

"There's laws bein' busted every day in the week," moaned the first. "Somethin's gotta be done about it."

"Wal," comforted the second, "I reckon we're makin' new ones as fast as the old ones is bein' broke."—Am. Legion Weekly.



## Clinical Report.

### FOREIGN BODY IN THE RECTUM.

W. P. Glendon, M.D., Bridgeton, N. J.

A middle aged man was admitted to the hospital on account of a very unusual accident. The following history was obtained in his own words: "I have frequently had a sensation of weight and pain, attended by bearing down pain, in the rectum, coming on at intervals, and in order to get relief, have been in the habit of setting on some hard object, pressed against the anus. On this occasion I placed a jelly glass on the end of a broom handle, and sat on it." While in this position, he became dizzy and fell over, with the result that the glass was driven into the anus, past the sphincters, and lodged in the pelvic portion of the rectum. All attempts to remove the glass failed and he consulted his physician, who advised him to go to the hospital.

I was amazed at what he told me and was inclined to doubt his statements. He was etherized and local inspection revealed a condition of the parts that made me suspect that he was a sexual pervert and had been in the habit of satisfying his desires by introducing foreign bodies into the rectum. The anus was relaxed, easily admitting the hand, so that I was able to feel the rim of the glass, but all my efforts to dislodge it were futile. No forceps would hold the glass, slipping off the rim, and I had to be very careful not to fracture the glass. I thought of obstetrical forceps and found it easy to introduce one blade, but the rectal wall could not be pushed up far enough beyond the edge of the glass to permit the other blade to be placed. The tumbler had entered the bowel bottom end up, and the rectal wall contracted around the rim to form a cervical ring over the rim, so that to the examining finger it conveyed the impression of a partly dilated cervix with a fetus presenting. I was unable to overcome this obstacle and had to think of some other plan. As no better expedient occurred to me, I was finally convinced of the necessity for removing the foreign body through the abdomen. After a brief iodine preparation of the skin, a right rectus incision was made, and the lower part of the sigmoid was isolated and carefully packed off with gauze; great care was taken to prevent contamination of the adjacent structures. Before opening the rectum, I made a further attempt at removal by bimanual manipulation under direct inspection, but without results, and then incised the anterior part of the sigmoid for 2½ inches. The glass was found to be tightly wedged in the hollow of the sacrum and it defied all efforts at removal through the incision, and I had to resort to the following plan: I passed the blade of a Deaver retractor through the upper end of the incision in the bowel down over the upper end, which was the bottom, of the tumbler and while so engaged had my assistant pass a blunt instrument through the rectum up against the bottom of the glass and push it upward, forcing it to roll out over the retractor. The rectal incision was then carefully sutured and a rubber tissue drain was left in the pelvis. There was some leakage from the bowel and some local infection, but this soon cleared up and the patient made a good recovery, a sadder and, to be hoped, a wiser man.

## Observations from the Lighthouse.

### PROGRESS IN BACTERIOPHAGY.

Those who read Sinclair Lewis' last "best seller" and appreciated Martin Arrowsmith's struggle with the laboratory and clinical problems concerning his bacteriophage must be much interested in the numerous articles appearing recently in respect to this general topic. Under the head of "Bacteriophage News", the Journal of the American Medical Association presented recently (85:2037, Dec. 26, 1925) the following interesting editorial summarizing present knowledge of the subject: "There is a fascinating aspect to the conception that bacteria are subject to enemies within their own camp. Mankind has been industrious in devising ways of destroying the harmful microorganism by a great variety of devices. Chemical as well as physical agents have been requisitioned in this bitter warfare; and when there has been no adequate kind of ammunition devised or available, defensive barriers have been erected. Antisepsis has vied with asepsis as a protective device. There can be no cessation of activities, for the menace is ever present and seizes every advantage of laxity on the part of the armies of preventive medicine. Lack of preparedness invites human disaster. In the midst of this tension has come the news of the bacteriophage, the reputed discovery of a filtrable, ultramicroscopic virus, parasitizing on and destroying actively growing, susceptible bacteria. Such a prospect of unsuspected potent help has been hailed with interest and enthusiasm not only by the scientist but also by the layman. It was d'Herelle's idea that there is only a single bacteriophage, common to man and animals, capable by adaptation of acquiring a virulence toward all bacterial species. This view of the unity of the lytic principle has been considerably debated. Obviously the determination of whether there is a multiplicity of bacteriophagic agents, each of which is more or less specific for definite microbes, is of great importance in attempts to employ the bacteriophage in the warfare against infection. At the Rockefeller Institute for Medical Research, Bronfenbrenner and Korb have lately observed persistent differences in the individual resistance of lytic filtrates active against different microorganisms in ways that lead them to favor the conception of the multiplicity of bacteriophages. This dissipates, for the moment, at least, the hope of a single universal panacea for those infected with bacteria".

Believing that a condensed account of some of the details of recent investigations into bacteriophage would be of interest, we have made a hurried resumé of the abstracts published in the national journal during the past year and submit the more important ones herewith. It would seem fitting, however, to precede these with a letter from Paris (J. A. M. A., 85:653, Nov. 21, 1925) instigated apparently by a recent article by d'Herelle, (Presse Médicale, Paris 33:1393, Oct. 21, 1925): "d'Herelle recalls that, in 1920, he isolated in Indo-China various strains of bacteriophages virulent for *B. pestis bubonicae*. One of these specimens, isolated at Bac-Lieu from the excreta of a rat after an epidemic of plague, was highly virulent from the start. After establishing that subcutaneous injection of the filtered bacteriophage culture caused no disturbances in the guinea-pig and subsequently none in himself, d'Herelle was about to employ the bacteriophage

in the treatment of plague when he was suddenly recalled from Indo-China. He has recently applied the treatment, with good success, in Egypt, where he is the Director of the Maritime Sanitary Council and the Quarantine Board. His report contains his observations in 4 cases of bubonic plague that developed on a steamer anchored in the harbor of Alexandria and treated by him in the quarantine hospital.

The bacteriophage cultures used in the treatment were prepared thus: To 10 c.c. of culture of *B. pestis bubonicae* (cultivated in bouillon for 24 hours) was added 3 c.c. of fresh bouillon inoculated with 0.02 c.c. of a previously prepared bacteriophage culture of high virulence for the plague bacillus. After being heated in an autoclave for 20 hours at a temperature of 37°C., bacteriophagea being then complete, the clear fluid was filtered and the patients were inoculated therewith directly in the buboes. In the 3 cases in which the culture was injected within 24 hours following the appearance of the bubo, the general condition of the patients improved rapidly within a few hours after the injection. In the fourth case, the intervention not having occurred until the third day, no definite improvement was noted until a few hours after the second injection. These injections caused no local or general reaction. In addition to the expected bacteriophagic action *in vivo*, injection of the bacteriophage exerts an antitoxic action.

In 1921, d'Herelle published his observations on 5 patients with bacillary dysentery treated by ingestion of a bacteriophage culture. He did not claim that the specific treatment of dysentery had been discovered but admitted that the facts were convincing to him personally. This treatment, since applied in tens of thousands of cases, has confirmed his belief.

"d'Herelle now asserts that bacteriophage therapy should constitute the specific treatment for plague. From 1 to 2 c.c. of a very virulent bacteriophage culture should be injected as soon as possible. Since the treatment is harmless, it can be given as soon as the diagnosis becomes clinically probable, without waiting for bacteriologic verification. A single injection is indicated if the temperature falls steadily; otherwise, a second, or even a third, injection may be given. In the absence of buboes, in septicemic and pneumonic cases, intravenous injections should be tried."

Under the title "The Present Status of Bacteriophages", Bail (Deut. Med. Wochsch., Berlin, 51:13, 1925) shows that the destruction of germs is only one of the actions of bacteriophages. The production of strains which are resistant against the bacteriophage used is more important for the identification of the latter. He believes that the bacteriophages represent splinters of chromatin which have preserved the dissolving but lost the constructive property. Addition of them to new germs, which are in the course of the process of division causes a predominance of the dissolving properties of their chromatin and forces it to become a bacteriophage. Bacteriophage-resistant strains are mutations due to a loss of the corresponding gen, which would otherwise become a new bacteriophage. It is possible that certain pathologic phenomena of an infectious nature might have a similar endogenous origin.

Bordet (Annales de l'Institut Pasteur, Paris, 39:717, Sept., 1925) argues that the bacteriophage is not a living virus but a lytic substance produced by the bacteria themselves. His present conclusion is based on his 5 years' study of this trans-

missible autolysis of bacteria. He regards the autolysis as the result of the elaboration of a lytic substance and assumes that this is a normal physiologic function of microorganisms. The growth of the bacteria proceeds unimpaired as long as the different lytic substances counterbalance each other or are not elaborated in excess. The lysis power and susceptibility to it vary in different bacteria. A bacterium unaffected by its lytic principle may be unable to resist the principle elaborated by another species. The receptivity of the bacterium and the local concentration of the lytic principle determine the number and extent of the areas of the transmissible autolysis. It is possible that analogous substances exert an influence on intercellular relations in higher organisms, contributing to normal functioning of organs, or inducing certain pathologic phenomena.

In the Journal of Infectious Diseases (37:35, July, 1925) Hadley points out that abnormally rapid growth is frequently observed in bacterial colonies under the influence of a lytic agent. Moreover, although such proliferations may be regarded as analogous to those seen in the tissues of plants and animals experiencing an infection with an ultravirus; similar proliferations may also result from mechanical and chemical stimuli. The observations reported, therefore, while in harmony with d'Herelle's conception of the bacteriophage as an ultravirus, cannot serve as proof of this view. The observations reported are also used as the point of departure for formulating certain modifications in d'Herelle's view which would make possible a correlation between his cases and a class of instances at present excluded by him from the phenomenon of transmissible bacterial autolysis is widespread in the bacterial world; and that, although d'Herelle's hypothesis offers the easiest and most obvious explanation of the problem, we should not yet close our eyes to other possible avenues of approach.

Saldanha (Arquivos do Inst. Bact. Camara Pestana, Lisbon, 5:2566, 1924) reports extensive research on the d'Herelle phenomenon, the results of which convince him that none of the theories so far advanced satisfactorily explain bacteriophagy. He asks whether it is conceivable that an ultramicrobe can be insensible to the most potent antiseptics, or that a ferment can be capable of multiplying itself. If the lytic agent were something secreted by the bacteria themselves, it should appear earlier and be more profuse when the bacteria are numerous, but on the contrary the bacteriophage multiplies much more rapidly in emulsions containing a scanty supply of bacteria. The absence of bacteriophage in the new-born, Pierret and Bilouet (Comptes Rendus de la Société de Biologie, Paris, 93:635, Aug. 14, 1925) examined of bacteria. Trying to determine the presence or the meconium of 8 newly born infants up to 4 days of age. No bacteriophage for Shiga's, colon or typhoid bacilli could be detected even in meconium rich in microorganisms. The bacteriophage content was excessive in the stool of an infant aged 12 days. It is suggested that this fact may be explained by absence of bacterial growth in the first few days of life.

Symbiosis of bacteria and the bacteriophage is considered by d'Herelle and Hauduroy (Comptes Rendus de la Société de Biologie, Paris, 93:1288, Nov. 27, 1925) who report that bacterial emulsions treated with the bacteriophage were passed through filters impermeable for ordinary bacteria. In a few days or weeks the filtrates



showed bacterial growth again, thus presenting secondary cultures of a filtrable form of bacilli resistant to the bacteriophage. With only slightly virulent bacteriophage the secondary cultures appeared rapidly, and the bacilli were almost unchanged. With a strongly virulent bacteriophage the cultures were scanty and tardy. No bacilli or cocci could be found in these cultures, only fine granules which gradually increased in number and size. When the secondary cultures are transplanted into a broth medium, the granules either resume the shape of normal bacilli or they may persist unmodified indefinitely. In this latter case they represent a perfect symbiosis of the bacterium with the bacteriophage. The symbiosis may be definitive or it may be interrupted by isolation on a solid medium. The phenomenon of symbiosis is also observed in secondary cultures from nonfiltered bacterial emulsions, if the bacteriophage is only slightly virulent. The vitality of the association—bacterium and bacteriophage is considerable. Shiga's bacillus, for instance, alone does not survive for more than a few weeks in broth, while in symbiosis with the bacteriophage it may be kept alive for 10 years. This fact, d'Herelle and Hauduroy say, may explain the reviviscence, the renewal of vital activity, of certain infectious diseases, the origin of which is still a mystery.

Several interesting articles have appeared concerning the chemical reactions of bacteriophage, one of which relates particularly to sodium chloride. Alessandrini (Policlinico, Rome, 32:1705, Dec. 7, 1925) found that all traces of bacteriophage action were lost in his cultures from a typhoid patient when the dilution of the culture was with physiologic sodium chloride solution and the tube was kept at a constant temperature of 37°C. for 10 days. Distilled water and hydrant water had no such action on the bacteriophage, and the destructive action of the sodium chloride solution could be averted by addition of a little calcium carbonate. These facts sustain, he says, the assumption that the bacteriophage is a living organism, as sodium chloride penetrating the living cell forms within the cell a toxic product in combination with the acid it finds there, and the cell dies. But this occurs only with a living cell. The bacteriophage behaves in this respect like a living cell. In this connection Calalb (Comptes Rendus de la Société de Biologie, Paris, 92:1442, May 29, 1925) reports that even a small quantity of ox bile inhibits the lysant property of the bacteriophage without destroying it; which may explain the fact that in typhoid fever and in typhoid carriers the bacilli linger for the longest time in the gall-bladder. Wolff (Nederl. Tijdsch. v. Genesk., Amsterdam, 2:1220, Sept. 12, 1925) states that trypsin loses its bacteriophage-like action when diluted to 1:200, while the bacteriophage is still active at this dilution, even after adsorption by kaolin. Heating trypsin abolishes the bacteriophage-like action, while heating scarcely modifies the true bacteriophage action. Other tests have all given concordant findings, he says, suggesting that the bacteriophage-like action of trypsin is due in reality to the actual presence of the bacteriophage in the trypsin. This has been d'Herelle's contention from the first, while others have hailed this action of trypsin as evidence that the bacteriophage is of ferment nature. Seiffert (Deut. Med. Wochsch., Berlin, 51:350, Feb. 27, 1925) reporting on Okamoto's experiments with bacteriophages finds that the lytic agent did not multiply if the germs were grown on protein-free mediums. He believes that

d'Herelle's phenomenon is due to an activation of autolysis by products of nitrogen metabolism which are otherwise further decomposed.

Coming now to the therapeutic aspect of the question, we find Munter and Boenheim (Zeitsch. fur Kinderhik., Berlin, 39:388, May 22, 1925) recording noted improvement in certain cases of colon bacillus cystitis in children and of dysentery in infants and young children after this method of treatment. The improvement could not usually, however, be clearly ascribed to direct curative action of the bacteriophage, partly because the infective agents proved lysoresistant in vitro and partly because of the probability of spontaneous convalescence. The apparent harmlessness of the lysin, however, seems to justify further experiments with this therapy. Frisch (Wien. Klini. Wochsch., 38:838, July 23, 1925) treated patients with chronic pyelocystitis with instillations of active bacteriophage cultures into the pelvis of the kidney and reports very encouraging results. Sick nga (Niederl. Maandsch. v. Genesk., Amsterdam, 13:141, 1925) found a bacteriophage constantly in the urine in 4 out of 26 cases of colon bacillus pyelitis in children aged from 5 weeks to 3½ years; the bacteriophage was found occasionally in 12 others but not at all in 10 cases. The course of the pyelitis did not seem to be modified by the presence or absence of the bacteriophage, and none was ever found in urine or feces that was strong enough for complete lysis of the corresponding bacillus in bouillon culture. An autogenous vaccine had little if any influence on the bacteriophage findings, but the presence of the bacteriophage seemed to detract from the action of the vaccine.

Concerning the part of bacteriophage in recovery from typhoid, Hauduroy (Presse Médicale, Paris, 33:525, April 22, 1925) cites d'Herelle's 31 cases and personal examination of 30 cases and affirms that the bacteriophage plays an unquestionable part in the process of natural cure. The phenomenon is explained by the lytic action of the phage on the bacillus. Cases with a predominant activity of the bacteriophage tend to recovery, while the reverse occurs in fatal cases. He made blood cultures in more than 20 patients: In the first 10 days the bacillus grew but the phage was rarely present, or was only weakly active; at the end of the disease if no bacilli could be cultivated from the blood a strongly active bacteriophage could be demonstrated; if bacilli were present, a phage of only moderate activity was found. Hauduroy observed 3 cases of typhoid with high fever, with rapid and sudden defervescence under the influence of an active bacteriophage that was manifest. He believes that the bacteriophage which changed the positive culture into a negative in vitro was evidently responsible for the defervescence and subsequent recovery of the patient.

Cowie, Parsons and Poncher (Michigan State Med. Jour., 24:294, June, 1925) report finding a bacteriophage or lytic principle developing uniformly and characteristically in the stools of scarlet fever patients, seldom in those of chickenpox; it had no lytic effect on hemolytic streptococci isolated from the throats of scarlet fever patients. The application of bacteriophagy to epidemics is considered by Topley, Wilson and Lewis (Jour. Hygiene, London, 24:45, July, 1925) who do not believe that the presence of bacteriophage will, in itself, prevent the spread of infection, check an epidemic when it has once started, or appreciably reduce the mortality among the population at risk.

## County Society Reports.

### ATLANTIC COUNTY.

Joseph H. Marcus, M.D., Reporter.

The monthly meeting of the Atlantic County Medical Society was held at the Chalfonte Hotel, on the evening of February the 12, Dr. D. Ward Scanlan, presiding. Dr. W. Blair Stewart, reporting as chairman of the Public Health and Welfare Committee, stated that the broadcasting of Health Talks was inaugurated in January. Those members of the County Medical Society who had already broadcast prepared articles were Doctors Samuel L. Salasin, Joseph H. Marcus, D. Ward Scanlan, Clarence L. Andrews and Clara K. Bartlett. Future talks will be given by Doctors A. Westney, W. P. Conaway, W. E. Darnall, P. Marvel, Jr., and G. F. Spencer.

Dr. Stewart further stated that the talks already given have aroused very favorable comment and were exceedingly well received and appreciated. He also mentioned that the complaints regarding the activities of illegal practitioners of medicine, are being investigated the Medical State Board of Examiners and that drastic and rapid procedures would soon be instituted against them.

Dr. Henry O. Reik, Editor of the New Jersey State Medical Journal, reported introducing a Physician's Title Bill, for legislation, substituting a modification of the previous bill, which was too verbose and was confusing to both the laity and profession. This bill is condensed into form similar to that enacted in the Province of Ontario, which limits the use of M.D. to the members of the medical profession and when used by Osteopaths, Chiropractors or similar cults, requires that a qualifying term must be used. Dr. Reik further stated that a series of bills had been introduced by various cultists—Osteopaths, Naturopaths, Chiropractors—which have for their object the banishment of present obstacles that limit their practice.

The State Board of Health, under Dr. Costill, has introduced an act which will compel the vaccination of all dogs, against rabies, and also a compulsory act which will result in a state-wide vaccination of school children against small-pox.

Dr. W. P. Conaway, chairman of the Board of Censors, stated that the following applications have been approved, and the candidates elected to membership in this society: Daniel C. Reyner, Louis Mackler, George J. Muellerschoen, Louis Elinore Hess and Charles Cunningham (Ham-monton).

Dr. W. E. Darnall, chairman of the Library Committee, stated that library cards had been sent to all members of the County Medical Society so that they may have full use of the medical department library, housed in the free public library of Atlantic City.

Dr. E. Uzzell made an urgent plea for all delinquent members to pay their dues to date.

Dr. Samuel Stern made the following motion, which was unanimously adopted: "That the County Medical Society go on record as endorsing the integrity and ability of Dr. E. Darnall's professional standing; and that, furthermore, he be highly commended for his able defense and fearless attitude against the malicious and unjust law-suit instituted against him; and that the medical profession, both in Atlantic City and elsewhere, owes him a debt of gratitude".

The scientific program was opened by Dr. Richard A. Kern, Associate Professor of Internal

Medicine, at the University of Pennsylvania; his subject was "The Diagnosis and Treatment of Hay Fever".

There followed a brief resumé containing interesting historic facts and scientific data, which eventually led to a basic foundation in the treatment of hay fever. Hay fever is a seasonal disease, dividing the incidence as follows; February, March and April is predominant in tree pollen, such as willow, pine, maple and oak. The season lasts but a few days and is of no practical importance. (2) May, June, July, in which the pollen of grasses predominate; timothy, orchard grass, etc. (3) Autumnal form which comprises 75% of the cases; most important factors, especially in New Jersey, being ragweeds (short and giant types), while minor causes are the aster and the copper burr. He stated that misconception existed regarding roses and golden rod. In the diagnosis of hay fever, the speaker emphasized the fact that multiple sensitization is the rule and not the exception and that the failure to cure in a certain percentage of cases is due to overlooking this important fact. In addition to being sensitive to pollen of plants or grasses, the individual may also be sensitive to animal emanations, as from goose feathers, chicken feathers, horse dander. Orris root and house dust must also be borne in mind as being disturbing elements. Certain manufacturers now carry stock dusts for sensitization.

Avoidance of the object which the individual is sensitive to, is preferable to attempting to desensitize. Dr. Kern quoted an interesting intensive campaign inaugurated in St. Louis in which the removal of weeds and grass from the vacant lots in the city reduced the number of cases 50%. In selecting the pollen for treatment he advises use of the pollen that is inherent to the locality and in some cases it is best to use mixed pollens and to carry on the treatment for a sufficient length of time. The method employed by some in using injections twice a day has been generally discarded.

Dr. Kern stated that the best method of treatment is in administering doses at intervals of 5 to 7 days with a gradual shortening of the interval and an increased dosage. This is the most important element in the treatment and as no 2 cases respond in a similar manner the initial dose is a varied one and should be a sufficient amount to cause a local reaction of mild degree. Dr. Kern did not speak very favorably of the employment of a "One-package Treatment Set" containing 4 doses. He feels that this material is too concentrated and embodies elements of danger. In addition these so-called treatment sets do not supply sufficiently potent doses for the last few treatments. He stressed the great importance of keeping in mind that these patients may also be sensitive to other irritants, as mentioned previously, so making them susceptible to multiple irritants.

It is of vast importance and essential to clear up all pathology before treatment, such as removal of nasal polyps, treatment of sinus infection, especially the ethmoid. It is advisable to carry out this operative procedure before the pollen season. Statistics show that 1 in 10 is hypersensitive to one pollen or another, making 10% potential sufferers. The tendency to inheriting these conditions, follow the Mendelian law; 40% of the offspring manifest this disease with one parent being sensitive, and 75% of the offsprings are sensitive if both parents are susceptible.

In closing, Dr. Kern stated that not a few hay



fever patients attribute the onset of symptomatology to a nasal operation during the hay fever season and it is most important to inquire as to a tendency to allergic disturbances before operating.

Dr. Kern's presentation was discussed by Drs. H. O. Reik, A. Westney, D. J. Miller, Clarence Andrews, W. Blair Stewart, of Atlantic City, and A. L. Bartlett of New York City. Dr. Kern, in closing the discussion, said there had been no deaths recently due to pollen injections; there were no lasting permanent cures but many cases benefited by the inoculations.

The latter part of the scientific program was continued by Dr. John T. King, Jr., of Johns Hopkins Medical School, Baltimore, his subject being "The Relation of Basal Metabolism to the Practice of Medicine".

After introductory remarks pertaining to the history of these examinations, the speaker stated that the 3 factors determining the level of the energy of metabolism in the normal organism are (a) muscular activities, (b) external temperature, and (c) digestion of food. A subject removed from the influence of these factors would be resting, at a comfortable temperature and several hours following the intake of food. The metabolism under these conditions would be at its lowest and therefore called "basal metabolism". It is the basal metabolism which is used in determining the effect of age, body weight, sex, stature, physical development, or of a disease of physiologic effect upon heat production. For experimental purposes the individual used for the establishing of a standard must enjoy the average state of health. The methods employed for the determining of these experiments are: (1) Direct calorimeter; (2) Tissot method which is most accurate but very difficult to perform; (3) measurement of the oxygen, or the closed system (most common); (4) by measuring carbon dioxide exhaled. Some of the factors deduced from the experiment for basal metabolism demonstrate that woman metabolizes 7% lower than men, and is highest at puberty after which there is a gradual decline towards old age.

In general there are 4 main avenues of escape for the heat which is produced in the body of a warm blooded animal: (1) Warming food and air which enter the body; (2) vaporization of water and set free carbon dioxide in the lungs; (3) evaporation of water from the surface of the body; (4) radiation and conduction from the surface of the body. The speaker stated that exophthalmic goiter embodied an increase in basal metabolism inasmuch as thyroid gland is one of the mainstays in heat production. Next in importance are the adrenals; activities of these glands can be measured by means of the basal metabolism experiment.

The following drugs have been demonstrated as being the causative factor in increasing basal metabolism; caffeine, aspirin, atropin and camphor. What constitutes abnormal metabolism depends upon the method used and different standards in the various methods employed.

Dr. King feels that elevated basal metabolism is an important element in hyperthyroidism. In exophthalmic goiter the basal metabolism reaches an extreme degree and it has been demonstrated that the administration of iodine reduces this metabolic rate. This is an exceedingly valuable therapeutic test in borderline cases. In toxic adenoma, basal metabolism is rarely above 50%; average being 30% plus.

This chemico-physiologic procedure can be frequently used as an aid in diagnosis and treatment.

Following an operation for exophthalmic goiter the determining of the basal metabolism rate should be continued to detect a recurrence of symptoms. Dr. King emphasizes the practical usefulness of this procedure in detecting under-activity of the thyroid; when a rate below 10% is effected the zone is an abnormal one.

At the menopause, the rate of basal metabolism is usually low and this is due to a physiologic under-activity of the ovaries. The following conditions present a low basal metabolism: Cretinism, colloid goiter, adiposa-genitalis, under-nutrition, especially in dyspepsia and neurasthenia, chronic eczema and ichthyosis. These conditions improve with the administration of thyroid extract and it is best to keep the basal metabolism rate just below normal.

Dr. King mentioned that some individuals with hypothyroidism cannot absorb thyroid extract taken by mouth. These should receive the glandular extract by hypodermic medication.

In the discussion of Dr. King's dissertation, Dr. Stone of the University of Pennsylvania, Graduate School of Medicine, praised his work and his original investigations of basal metabolism. Dr. Stone stated that a certain method is used in differentiating between renal glycosuria and true diabetes. He feels that this procedure can be determined without placing the patient in the hospital but only if certain standards are strictly adhered to. At present, he said that experiments are being conducted at the Philadelphia General Hospital, demonstrating the general effect of basal metabolism in drug addicts.

Further discussion followed by Drs. Kern, Belas, Burel and Scanlan.

#### Atlantic City Hospital Staff.

The Atlantic City Hospital Staff held its monthly meeting on the evening of January 15, at 8:30, at the Hotel Breakers. The meeting was called to order by the President, William C. Westcott.

Due to the absence, on account of illness, of Doctors Richard Bew and Theodore Senseman, Medical and Surgical Directors respectively, Dr. W. J. Carrington reported that the recommendation of the Staff regarding the appointments advised at the previous meeting had been passed upon by the Board of Governors.

Letters from Doctors Samuel Gorson and Karl M. Scott, were read in which they made application for positions on the Staff. It was moved and properly seconded that those letters be set aside until a later date.

Dr. Samuel L. Salasin moved that a vote of confidence of the Staff be expressed to Dr. W. E. Darnall regarding his integrity and ability. A rising vote by the entire Staff followed.

Dr. Darnall expressed his profound and grateful appreciation for this rising and unanimous vote of confidence. He recommended the adoption of blanks to be used in obtaining signatures for operation or medical procedures to be used for patients entering the Atlantic City Hospital.

Dr. W. P. Conaway stated that he had already instructed his attorney to prepare such a blank and furthermore seconded the previous motion that the Staff adopt this blank system and recommend to the Board of Governors its general usage.

Dr. W. C. Wescott appointed the following committee to pass upon an appropriate permission slip: Doctors Edgar Darnall, Theodore Senseman, W. P. Conaway and Richard Bew.

Following a general discussion, Dr. Norman J. Quinn presented the following motion: "That the chiefs of the various services confer with the interne committee in order to devise and formulate plans whereby greater efficiency may be displayed and a more satisfactory relationship between the internes and chiefs be created."

Dr. Theodore Senseman was appointed Chairman of this special conference.

The Scientific Program was instituted by Dr. Robert A. Kilduffe, Director of the Laboratories, his subject being "Report of the Laboratory for 1925". This report covered a period of 9 months, from April to December inclusive.

Following a preliminary talk based upon the relationship of the laboratory to the various services, Dr. Kilduffe presented the complete statistical report and advanced several criticisms which embodied the following points: (1) A more intensive experience for the resident physicians in laboratory training. (2) Advisability of routine bacteriologic survey of the milk and water supply of the hospital, of sterile supplies and checking up on the operating technic. (3) A more thorough method in the transmission of reports and their completion. (4) A more rapid transmission of tissue reports. (5) Making the laboratory more comprehensive and broader as an investigating center and emphasizing the fact that greater opportunity for clinical investigations are available. In closing Dr. Kilduffe acknowledged the cordial coöperation extended from several sources and expressed the hope that the laboratory had only begun to approximate its usefulness to the hospital and community, and that the future will show still further advancement and improvements.

Dr. Kilduffe's excellent presentation was discussed by Doctors Darnall, Carrington, Scanlan, Andrews, Wescott, Marvel, Jr., Pilkington and Quinn.

The Scientific Program was continued by Dr. Walt P. Conaway with a report of the Gynecologic Service from August 1 to December 1, 1925. During this period there were 72 admissions, 53 white and 19 colored. Of these patients, 69 were operated on; 53 white and 16 colored, and there were 136 major and minor operations. There were 2 deaths. The total number of hospital days was 739, making an average of 10.6 days per patient. Three were discharged as cured without operation. There were 18 incomplete abortions, 2 of which were criminally produced. There were 4 infected wounds and several stitch abscesses; 2 of these wounds showed the colon bacillus and 2 showed staphylococci. The first death occurred from acute gastric dilation, 3 days after hysterectomy for a fairly large fibroid with very adherent pyosalpinx. The second death was caused by general peritonitis and occurred 8 days after operation for a small uterine fibroid about the size of an orange, but with very dense pelvic adhesions and chronic salpingitis.

An especially interesting case was that of a young colored woman, who gave a history of having been ill only about a week from internal inflammation following a cold. She was admitted late one afternoon and died during the night. A diagnosis of acute peritonitis was made on admission, and operation advised against at that time. Postmortem revealed a ruptured pus tube and general plastic peritonitis. There was no evidence of trauma in the uterus, and the appendix was apparently normal. The other tube was an unruptured pyosalpinx.

A case of more than usual interest was that

of an Italian woman 35 years of age, pregnant at term, who was admitted to the hospital August 8, suffering from lobar pneumonia and acute nephritis. An examination by Dr. Ireland revealed an additional complication of placenta previa. She was referred to this service by Drs. Chew and Andrews. All of these gentlemen agreed that it was advisable to relieve her of her pregnancy. The seriousness of her condition on account of the pulmonary and renal complications, as well as the abnormal presentation, of course rendered any surgical procedure all the more hazardous. Instead of inducing labor, it was felt that a celiohysterotomy gave her more chances of recovery. She was operated on August 11 and a living male child removed which weighed about 6 pounds. The diagnosis of central placenta previa made by Dr. Ireland was confirmed at operation. The baby was revived after some difficulty and the patient made, surprisingly, an uneventful recovery. The pneumonia and nephritis rapidly cleared up and she left the hospital August 27 with her baby, both in good condition and only 16 days after operation.

Dr. Conaway said, of another case, I think you will enjoy hearing the story of one of my private patients, Mrs. A. E. H., 43 years old, who was under my care from August 6 to November 5. Her history was that of a sufferer from irregular attacks of uterine bleeding for about 8 years. Two years ago she was given the Vivavi treatment with a promise of cure in a few weeks. There was no improvement of course from this treatment and she was admitted to the hospital on August 6 with the diagnosis of a severe secondary anemia from a large uterine fibroid. A blood examination on admission showed only 16% hemoglobin, 2,100,000 red cells and 3140 white cells. The red cells exhibited a marked anisocytosis and poikilocytosis. A consultation by Doctors Bew and Scanlan confirmed my opinion as to the advisability of hysterectomy at that time. She was given a blood transfusion, 620 c.c., by the Unger method on August 12. On August 15, 100 milligrams of radium was inserted in the uterus and allowed to remain there 24 hours. On August 19 her hemoglobin was 25% and her red cells 3,500,000. On August 23 her hemoglobin was 24% and her red cells 3,300,000. She was allowed to return home on August 29, and was given a modified rest cure for a few weeks in hopes of improving her general condition. On October 14 she was readmitted to the hospital for operation. Her hemoglobin on admission this time was 35%, red cells 3,190,000, and white cells 3200. I operated on her October 15 and did a hysterectomy, double salpingectomy, left oophorectomy, and appendectomy. During the operation, 300 c.c. of saline solution was given intravenously. There was considerable cyanosis all during the operation but she reacted very promptly and made an uneventful recovery. On November 4 her blood count showed 2,950,000 red cells, 5000 white cells and but 42% hemoglobin. She was discharged on November 5. I saw her in my office last week, and she had gained 18 pounds in weight and feels well.

Mrs. B. H., white, aged 28, para three gave a history of an attack of gall stones, about 1 year ago. September 16 she had a sudden severe pain in the upper right quadrant. A hypodermic of codein  $\frac{1}{4}$  gr. seemed to relieve this pain. At 10 a.m. the same day there was some rigidity and pain at the gall-bladder region. At 9:30 p.m. the pain was much worse and a hypo-



dermic of morphin  $\frac{1}{4}$  gr. was given. The next day about 9 a. m. the pain had ceased and at 1 p. m. she said she felt well. There was some swelling of the abdomen, her pulse very rapid and thready, and some thirst. She was admitted to the hospital at 3 p. m. The swelling of the abdomen gradually increased, pulse became weaker and more rapid and her general condition was one of profound shock from some internal abdominal catastrophe. Vaginal examination was negative. After several consultations it was decided to do an exploratory laparotomy. This was done about midnight and a ruptured common bile-duct was found. There were several quarts of greenish yellow fluid in the abdominal cavity but the gall-bladder was small and apparently normal. She died about 2 hours later.

Dr. Conaway's cases were discussed by Doctors Carrington, Andrews, Kilduffe, Darnall, Uzzell, and Wescott. Dr. Wescott outlined the method of radium application, as used in the Curie Institute in Paris, as witnessed by him on recent occasions. Dr. Conaway closed the discussion with an outline of the technic of radium administration as witnessed by him at a recent meeting of the New York Obstetric Society, held at the General Memorial Hospital in New York City.

The following officers were unanimously chosen to serve for the year of 1926: President: Richard Bew. Vice-President: Samuel L. Salasin. Secretary: Joseph H. Marcus. Treasurer: Joseph Poland. Program Committee: W. J. Scanlan. Interne Committee: W. J. Carrington and David B. Allman. Nurses' Committee: Theodore Sensoman, W. E. Darnall and E. C. Chew. Chairman of the Building Committee: Theodore Senseman.

### BERGEN COUNTY.

H. B. Wolowitz, M.D., Reporter.

The regular February meeting was held at the Hackensack Hospital, on Tuesday evening, February 9. At this time a resolution was passed thanking the Board of Freeholders for their efficiency in keeping the county roads clear in spite of the heavy snowfalls.

Dr. J. Finley Bell, of Englewood, was elected to the newly created office of historical secretary. Dr. John E. Pratt, of Dumont, was made an honorary member of the society.

The paper of the evening was presented by Oswald Swinney Lowsley, A.B., M.D., F.A.C.S., on "Major Operations Upon Organs of the Genito-Urinary Tract Under Regional Anesthesia."

Regional anesthesia as a method of rendering the patient insensible to pain during major urologic operations, has won a fixed and permanent place in our clinic. As our experience increases our enthusiasm grows.

During the first year and a half the surgeons of the department were obliged to give the anesthetic themselves. This is entirely unnecessary, and has been corrected by the employment of an anesthetist. The administration of regional anesthesia is not a trick performance. It is based on sound anatomic principles and anyone willing to make a careful study of the various procedures necessary can accomplish it.

We feel very strongly that there is a firm place established in the science and art of medicine by the trained Doctor Anesthetist. In order to maintain the high place attained in our midst, he must perfect himself in every type of anes-

thesia, including all kinds of inhalations, colonic ether and regional, as well. It is not proper or fitting that the surgeon, who should be busy doing research work in his spare time, should be obliged to administer routine anesthetics of any description.

Most procedures in surgery seem to be fairly well standardized with the possible exception of operations in the thoracic region and upon the brain. Therefore it seems reasonable to presume that the next great advance in surgery will be along the line of anesthesia. Our personal opinion is that this will take the form of discoveries of new anesthetic agents of less toxicity and better methods of administering them. Practice makes perfect in this field, as in all others. We feel that the last 25 cases that we personally injected, were more thoroughly anesthetized than the first 25. We also feel sure that our regular anesthetist does them better than we do.

Sacral anesthesia was originated by Cathelin and Durant in 1902, who sought to relieve sexual neuroses and incontinence of urine by injections into the sacral canal. Since this beginning, many modifications have been suggested and methods perfected by a large number of active workers, so that now we are able to do any major operation upon the bladder, prostate, urethra, or sexual organs under its influence.

Three years after publication of the original work by Cathelin and Durant, Hugo Sellheim reported his experimental work on surgery of the abdomen. It was not until 1911, however, that paravertebral anesthesia was applied to urologic surgery. In that year Lawen successfully performed nephrotomy on an old man under its influence. Much clinical and experimental work has been done in Europe since the humble beginning mentioned above. This was interrupted during the World War, but received new impetus immediately thereafter.

In America interest has not been widespread. Several pioneers have written articles from time to time, but the profession as a whole, has been slow to adopt the methods described. The formation last year of the American Society of Regional Anesthetists seems to be an important step forward in the dissemination of knowledge regarding this most important milestone in the march of surgical progress.

### Illustrative Cases.

**Case 1.** J. L. Van B.: Papillary carcinoma of the kidney. Date of admission: October 22, 1924. Date of discharge: November 18, 1924.

**Complaint:** Hematuria. Nothing in history of any importance. Right kidney palpable and movable with some tenderness on deep pressure.

**Cystoscopy:** Urea estimation on right side 16 gm. per l., on the left 17 gm. per l. Phenol-sulphonephthalein on the right side 1%, on the left side 5%, total amount collected for 10 minutes. The microscopic examination on the right side showed few red blood cells, and an occasional epithelium cell, and the left side showed the same.

**X-Ray:** There was a big shadow above the pelvis of the right kidney, apparently connected with the kidney shadow. No evidence of stone.

**Pyelogram:** Showed a filling defect in the upper calix on the right. At the ureteropelvic junction there was a right-angle kink, and below this a narrowing of the ureter, just below the ureteropelvic junction, and also a narrowing further down.

**Diagnosis:** Tumor of kidney.

**Suggestion:** Nephrectomy.

**Operation:** Right nephrectomy. Paravertebral anesthesia. Superficial and deep tissues bled freely. Many large veins found coursing through the fatty capsule over kidney. Kidney was delivered with much difficulty. It was found to have a tumor on its upper pole about the size of a grapefruit. There was much difficulty encountered in placing the clamp on the pedicle. Two double catgut sutures were placed about the pedicle. Cigarette drain placed down to the pedicle. Wound closed in layers. Patient left hospital 16 days after operation in apparently perfect physical condition.

**Pathologic Diagnosis:** Papillary carcinoma of kidney.

**Case 2.** J. F.: Ureteral calculus. Date of admission: January 5, 1925. Date of discharge: January 22, 1925.

Patient first entered hospital for hypertrophied prostate, and had a perineal prostatectomy. Two years later he was admitted for hydronephrosis and abscess of left kidney, for which a pyelotomy incision and drainage was done under regional anesthesia. It was known at this time that he had a stone in his left ureter causing obstruction. The kidney being in an acute stage, it was deemed advisable to relieve the hydronephrosis and abscess, with the hopes of restoring the kidney function. Four months after this, the patient returned to the hospital with a clean kidney wound, which was draining urine freely, thus showing that the kidney had been restored to function. At this time the problem was to remove the stone from the ureter, and close the sinus, thus causing the urine to go through its normal channel from the kidney.

**Operation:** Ureterotomy for stone—Paravertebral anesthesia. Gibson's golf-stick incision was made down to the peritoneum, which was stripped back and the ureter exposed. The stone being found, the ureter was opened directly over it, and the stone removed. It measured about  $1\frac{1}{4}$  cm. in diameter. The ureteral probe was then passed through the opening downward to the bladder, and upward to the kidney. A drain was placed at the site of the ureterotomy, and the wound closed in layers. The patient recovered uneventfully, and walked out of hospital 34 days after operation with no sinus and with normal function of both kidneys as proved by cystoscopy.

**Case 3.** H. M.: Vesical diverticulum, vesical calculi and suprapubic sinus.

Date of admission: January 20, 1925. Date of discharge: March 2, 1925.

Patient entered hospital complaining of suprapubic sinus, which had been open 2 years following operation for bladder stone, at which time no stones were found.

**Cystoscopy and Cystogram:** Revealed 3 diverticulas extending from the posterior wall of bladder, all of which were filled with stones.

**Operation:** Cystotomy and resection of diverticulas; sacral and parasacral local anesthesia. Usual suprapubic incision was made. Bladder opened along its entire anterior wall. The diverticulas were each resected in toto, and the opening left in the bladder wall was closed with plain catgut. Bladder was then closed around the suction drainage tube. After 2 weeks, suction drainage was removed, and the suprapubic sinus allowed to close. Recovery of the patient was uneventful and complete. After being in hospital for 50 days, patient walked out in apparent good health. Had complete control of his urine. Was voiding in a normal manner.

**Case 4.** J. S. O'D.: Enlargement of postate. Date of admission: January 29, 1925. Date of discharge: March 1, 1925.

Patient, a man 62 years old, entered hospital complaining of complete retention for 1 week, and inability to empty bladder for 2 years. Nothing of importance in the history. No abnormal physical findings, except for a large prostate and râles in the apex of the left lung. Suprapubic cystotomy was done, and the patient allowed to drain for 13 days. Then a perineal prostatectomy was done under sacral and parasacral anesthesia. The patient's wounds healed by first intention, his recovery was uneventful, and he walked out of hospital in apparently perfect health, 20 days after the perineal prostatectomy. He was voiding normally, had complete control of his urine, and was able to completely empty his bladder. Pathologic diagnosis: Hypertrophied prostate.

**Case 5.** C. P.: A Peri-urethral scar and urethral stricture. Date of admission: January 8, 1925. Date of discharge: January 13, 1925.

Patient, an Italian man, 46 years old, fairly well developed. Fifteen years before he had stones removed from each kidney. One year ago he entered hospital with an impacted stone in the posterior urethra and infiltration of urine in scrotum and perineum, tissues were gangrenous.

A urethrotomy was done, and the perineum and scrotum incised in numerous places. He recovered from this with a sinus in the posterior urethra, anterior to which there was an impassible stricture. He entered hospital in this condition with a large area of firm scar tissue in the region of the sinus and stricture.

**Operation:** Resection of scar tissue and urethral sinus; local anesthesia. The old scar tissue was resected, and No. 18 French rectal tube was inserted through the urethra and anchored in place. Patient left hospital 5 days later wearing a retention catheter to report to out-patient department for observation. One month later the sinus was completely closed and No. 26 sound passed easily. At present the patient is having sounds passed once every 2 weeks, and has had no trouble with his stricture. He now takes a No. 30F. sound without difficulty. This patient for past 15 years has passed small stones. At present he has stones in both kidneys but by repeated dilatations, he has been enabled to pass the small ones, and his kidney function is good. Perhaps at a later date, if the patient agrees, the larger stones will be removed from the kidneys.

### Conclusions.

(1) Operations upon every organ in the genito-urinary system are practicable under regional anesthesia.

(2) The supreme advantages are: (a) That the patient may take fluids up to, during and immediately after operation. (b) The blood pressure is not elevated as it is in any type of inhalation anesthesia, or depressed as it is in spinal, therefore there is very little bleeding during the operation. (c) The anesthesia persists for many hours after administration thereby eliminating pain and frequently rendering the administration of opiates unnecessary as a post-operative procedure.

(3) The supreme disadvantage is that what is injected cannot be extracted, therefore it must be given slowly and one must stop at the slightest evidence of toxicity.

(4) That great group of lung complications including "ether pneumonia" is eliminated.



(5) The convalescence of the patient begins when the last suture is tied and is shortened very considerably.

(6) The mortality rate is reduced to a minimum.

(7) Regional anesthesia is the work of the professional anesthetist and not of the surgeon.

### CAMDEN COUNTY.

Grafton E. Day, M.D., Reporter.

The regular February meeting of Camden County Medical Society was held at the Camden City Dispensary on Tuesday afternoon, 9th inst., with President Elwell in the chair. The minutes of the October and December meetings were read and approved.

Dr. A. Haines Lippincott reported concerning several measures before the Assembly, affecting physicians.

A letter of appreciation for flowers sent was read from Mrs. Kelchuer, widow of Dr. W. I. Kelchuer.

Dr. R. K. Bush, Merchantville, was elected to membership. Dr. Lester C. Wilson, Camden, was proposed for membership.

Dr. B. A. McAlister, Secretary of the State Board of Medical Examiners, reported, reading extracts therefrom, on Assembly Bills 196 and 250, which were declared vicious. These referred to chiropractors and osteopaths.

Dr. Lippincott moved, and it was carried unanimously, that we disapprove Bills 196 and 250, and that the secretary be instructed to so notify our Senators and Assemblymen.

Dr. Samuel S. Kellern then read a paper on "Some Aspects of Maxillary Sinusitis", with lantern demonstration. Drs. Klein, L. B. Hirst, Lee and Elwell discussed the paper.

Councilor Marcus W. Newcomb told of medical conditions in his district. At the close of the business and scientific session dinner was served.

### ESSEX COUNTY.

Alfred Stahl, M.D., F.A.C.S., Reporter.

A stated meeting of the Essex County Medical Society was held Thursday evening, February 11, 1926, at the Academy of Medicine, at Newark, New Jersey. Some 250 members attended.

Dr. Lawrason Brown, of Sarenac Lake, New York, read a paper on diagnosis of Pulmonary Tuberculosis. Dr. Brown was entertained at dinner by the Council at the Elks' Club, preceding the meeting.

Dr. Pinneo reported concerning the Welfare Committee, stating that a great deal of work was being done by the committee at Trenton, but as yet he could only report progress.

The following physicians were duly elected to membership in the society:

Winifred D. Banks, 6 North Munn Avenue, East Orange; E. Mayfield Boyle, 392 Washington Street, Newark; Henry C. Cassini, 174 Hunterdon Street, Newark; Herbert M. Ill, 188 Clinton Avenue, Newark; E. Clarence Kern, 45 Park Street, Montclair; Sol I. Lurie, 336 Belmont Avenue, Newark; William K. Pudney, 11 Seymour Street, Montclair; Robert F. Roh, 117 South Orange Avenue, Newark; Edward Warren Ripley, 11 Seymour Street, Montclair; James B. Shannon, 56 Church Street, Montclair; Elias Shayness, 158 Clinton Place, Newark; Joseph Skwirsky, 130 Watson Avenue, Newark; S. Leonard Spinner, 175 Ferry Street, Newark.

### HUDSON COUNTY.

M. I. Marshak, M.D., Reporter.

The Hudson County Medical Society met on February 2, 1926, at the Jersey City Hospital, with Dr. J. F. Londrigan presiding.

The guests present were Dr. L. I. Harris, Health Commissioner of New York City, and Drs. S. B. English, of Glen Gardner; J. R. Morrow, of the Bergen County Sanitorium; J. Runnels, of the Union County Sanitorium; B. Harmon, of the Essex County Sanitorium, and Dr. Dorn, of Glen Gardner.

A motion was made and passed to have membership cards printed and distributed to all members of the society in good standing. A resolution to request information in regard to a physician's exchange from the Telephone Co. was passed. The State Welfare Committee reported that they will give active support to only 2 bills, The Doctor's Title Bill and the Bill on Medical Expert Testimony. The last bill will be introduced under the auspices of the State Bar Association. They will also recommend that the Legislature pass a bill for compulsory vaccination of all dogs against rabies; and one for the compulsory vaccination of all school children against small-pox. A motion was made that each member of the society be informed in regard to these bills by giving them proper space in the Bulletin.

Dr. B. S. Pollak then read the paper of the evening on "Masked Tuberculosis". This was a plea for more accurate diagnosis of tuberculosis, and better training in colleges and hospitals in tuberculosis diagnosis and management. He stressed the difficulties sometimes encountered in differentiating between tuberculosis and various other diseases. The first group of the latter being the continuous fevers, like typhoid, and the intermittent fevers such as malaria and rheumatic fever. Patients with heart symptoms, both objective and subjective, form the second group.

The third group consist of diseases causing digestive and alimentary tract disturbances, and dyspepsias; while the nervous system diseases and manifestations, such as neurasthenia and the various endocrine gland disturbances form another group. He further stated that there is a definite tuberculous albuminuria which is cleared up by rest in bed; that the symptom complex of simple anemia may mask a tuberculosis, especially in children. Next to syphilis, tuberculosis should be suspected in all cases of amenorrhea without traceable cause. He claimed that physical signs are frequently not in keeping with the pathologic developments and that tuberculosis may be present for a long time without showing manifest signs and symptoms, therefore exceeding care in history taking is necessary. X-rays will show disease in the lungs before the tubercle bacillus can be demonstrated in the sputum.

The four-reel moving picture film on tuberculosis was then shown. It shows in a graphic way, the anatomy, the histology, the process of tubercle bacillus invasion in the lung, and tubercle formation. By showing many films taken of a case which progressed rapidly, they were able to show the rapid extension of a lesion into the lung, with final destruction. This film was produced after many years of work by Lewis Gregory Cole, of New York. The society had the privilege of viewing this film through the courtesy of the Board of Managers of the Hudson County Tuberculosis Sanatorium, of which Dr. G. K. Dickinson is president.

Drs. Harris, Dickinson, English, Runnels and Pollak discussed the paper. The discussion stressed the following points: Detection of cases

is one of the most difficult problems in public health work. This at times is most difficult because patients wait for long periods after the onset of symptoms before consulting their physicians, despite the intensive campaign of education which has been going on for the past 20 years. Tuberculosis is measureably decreasing. In this diminution we are aided by the improvement in economic, housing and social conditions. One test of great aid in diagnosis is proper temperature readings. A low grade constant fever, which temperature is not stable, easily being affected by exercise, is very suspicious of tuberculosis. There are an increasing number of accurate diagnoses by practitioners in recent years. A patient 10 pounds or more under weight with a rise in temperature after 2 p. m., with or without cough, should be considered suspiciously tuberculous. The difficult cases require a great deal of thought, time and work, in order to arrive at a diagnosis. A very difficult problem to work out is, whether, a patient with an old healed lesion is having a breakdown or some acute or subacute intercurrent disease. Subacute and chronic pelvic conditions in women are often mistaken for tuberculosis.

#### The Osler Clinical Society.

M. I. Marshak, M.D., Reporter.

This society met at the Union League, January 20, 1926, with Dr. Londrigan presiding.

The following cases were presented by Dr. Julius Heilbrunn: (1) "Congenital Neurocytoma", and (2) "Congenital Lucs".

Dr. Heilbrunn reported the following in the case of "Congenital Lucs".

This patient was the only child living of 4; the other 3 died within 3 days of their birth. On admission, the child showed a hydrocephalus of 2 inches, craniotabes, poor mentality and development, a palpable spleen, nystagmus, sinking in of the bridge of the nose, a ham-colored discoloration of the skin which was preceded by a maculopustular rash, wide open fontanelles, a 4 plus Wassermann, fissured anus and a specific chorioretinitis, though there was no involvement of the optic nerve. The only complaint was a "cold in the head" which had lasted 2 months. The treatment consisted of 1/10 gr. of calomel t.i.d. with intramuscular injections of sulpharsphenamin. The prognosis depends on the nutritional element. In this case, it seems good.

Dr. Rosenstein questioned the factor of hydrocephalus. Dr. Heilbrunn feels that this is due to syphilitic meningitis and will clear up. Dr. M. Shapiro thought that treatment of the mother with salvarsan in the breast-fed case should give good results. Dr. Leo Koppel advocated the use of neutralneosalvarsan and mercury inunctions and felt that treating the infant directly is a more logical and successful method.

Dr. Heilbrunn also reported the following cases:

A 3 months' old child with complaint only of a suddenly enlarged abdomen. This was a progressive enlargement of one week's duration. There were present vomiting, restlessness and some fever. The examination showed a well developed child having very prominent veins on the abdomen, marked distension, a very large liver, fluid in the left flank, edematous extremities, and a mass in the left abdomen, made out by rectal examination. The x-rays showed increased shadows of the liver and spleen, marked increase of gas in the intestines, the stomach displaced to the left and downward, with a general gastro-intestinal hypomotility. The blood count was red cells

3,344,000, white cells 11,800. Hemoglobin 8 gm. per 100 c.c., with a color index of 48%. The differential diagnosis had to take in congenital lucs, Banti's disease, Van Yack's anemia, Hodgkin's disease and tuberculous peritonitis. Banti's disease and Hodgkin's disease were ruled out by the age of the patient, Van Yack's anemia by the blood picture, tuberculous peritonitis by a negative Von Pirquet reaction and lucs by a negative Wassermann. The patient died in 6 days and autopsy disclosed a retroperitoneal congenital neurocytoma with metastases in the liver, both adrenals, retroperitoneal glands and testicles.

Dr. Miner presented a case of "Demoid Tumor", one of Kronkenberg tumor and a patient who had his spleen removed for pernicious anemia in 1924:

Case 1: Demoid tumors have been classified as fibroids, myxosarcoma, etc. The differential diagnosis is difficult. They may feel like fatty tumors or cold abscesses. Demoids are usually found in the sheath of the rectus muscle above the umbilicus.

Case 2: Kronkenberg tumor, a rare type of ovarian malignancy, was named by Kronkenberg in 1896 as fibrosarcoma-carcinomatoid. They are generally bilateral, grow slowly and consist of large polyhedral mucoid cells. Death is caused by extension and recurrences. In this case, the only symptom present was menorrhagia. On opening the abdomen, a fibroid type of tumor of the ovary was found and removed. On section it proved to be a Kronkenberg tumor. It was unilateral and up to this time, one year after operation, has not recurred or metastasized.

Case 3: This patient was shown to the society one year ago. He is still in good health, looks well, feels well and has worked regularly. His last blood count a few months ago showed 4,000,000 red cells with no pathologic cells. Before operation the count was at times less than one million.

Dr. M. Shapiro presented a case of multiple extragenital chancre. These chancres developed on the cheek and lips of the patient about 6 weeks after having been kissed. The original lesion of which photographs were shown looked like gumma with mixed infection. The Wassermann was 4 plus. The patient was treated with salvarsan with quick results. He drew attention to the fact that there was no scarring of the mucous membrane, though there was distinct scarring on the cheek.

Dr. Leo Koppel thought that both lesions were due to the one infection. The marked scarring was due to mixed infection.

Dr. M. Frank read the paper of the evening on "Spastic Paraplegia". Next to static conditions and infantile paralysis it produces the largest group of cases in the clinics. It, therefore, becomes an important economic problem. Spastic paralysis is characterized by motor weakness, spasticity, loss of coordination and paralysis. It results in atrophy, contractions and deformity. Etiologically, there are 2 varieties, congenital and acquired. Pathologically, there are hemiplegic, paraplegic, diplegic, general and monoplegic types. The results of the brain lesions are cysts, brain softening, atrophy and sclerosis. There are also secondary changes in the lateral pyramidal tracts of a degenerative nature. The mentality in these patients varies from normal to complete idiocy. The progress is slow. The paraplegics and diplegics die before 20, the hemiplegics sometimes live till 40. The milder cases improve mentally and physically under proper



treatment, which consists of surgical and manipulative management and training.

Twelve case histories were cited; 5 were hemiplegics, 4 paraplegics, 1 case of diplegia and 2 cases of general paralysis; 7 were congenital. One case followed a protracted labor, 1 a difficult forceps delivery, 1 was premature and the rest were normal delivery. One case followed an attack of diphtheria, 1 is probably due to a beginning dementia praecox and 1 has a hydrocephalus. Eight have a normal mentality, 1 is a hopeless idiot and the other 3 are mentally deficient. Under treatment the improvement has been slow in all with varying amounts of success. The results are not very gratifying if we take into consideration the ultimate ability of these patients to be self-reliant and self-supporting.

Discussing this paper Dr. Linden stated that a Wassermann of the parents should be taken in every case. Treatment of the parents will prevent future cases. The condition is frequently due to lack of brain tissue development.

Dr. Levine stated that treatment depends on the etiology. Disease in the gestating mother should be properly treated. The treatment consists of surgery, orthopedic procedures to correct malposition of joints and the necessary physical training. The progress is usually slow. He advised against the use of electric stimulation.

Dr. Doran stated that this is really an in-coordination between the nerve and muscular systems. The characteristic signs are in-coordination, hypertonia and increased reflexes. Muscle weakness and wasting come late in the disease and are followed by atrophy due to fibrillation and over activation. The orthopedic condition is really an end-result or is a complication. The disease is really one of the nervous system and should be so handled. The work of Royal and Hunter, section of the posterior root fibers at their exit from the spinal column, is highly experimental but seems to be of some clinical value. There has been no corroborative work done as yet on Hunter's ideas.

Dr. Heilbrunn stated that Dr. Sharpe of New York, recently issued an article dealing with 5100 such cases. He found that 12% showed signs of intracranial pressure. More attention should be paid to diagnosing intracranial hemorrhage at birth. Lumbar puncture on 100 consecutive births, shows 10% with evidence of intracranial hemorrhage, with bloody spinal fluid under pressure as shown by a manometer. The number of hemorrhage cases was as frequent in normal as in forceps delivery.

Dr. Leo Koppel stated that lues does not play any important part in these cases. The Wassermann test therefore is of little importance.

Dr. Rosenstein stated that cases of spastic paralysis following diphtheria are exceedingly rare. Diphtheritic paralysis is flaccid in type and usually clears up.

Dr. Frank closed the discussion. He agrees with Dr. Koppel, that syphilis plays a minor part in spastic paralysis. Dr. Royal's operation can only be used in the plastic type of case. So little work has been done with this operation that it would be a fallacy to hold out too much hope because of it. Many cases are not due to intracranial hemorrhage or pressure, but are due to maldevelopment of the brain. In the case following diphtheria he is inclined to believe that it was no doubt coincident.

## MERCER COUNTY.

A. Dunbar Hutchinson, M.D., Reporter.

The following is a report of the several meetings of the Mercer County Society for the month of February:

A special meeting of the Mercer County Medical Society was called by the President on January 22, for the purpose of taking suitable action following the death of B. Henry Tadeusiak, M.D., on January 20.

The President, Dr. Comfort, after stating the purpose of the meeting, called upon Dr. Sica, who gave a very interesting account of the distinguished service that Dr. Tadeusiak had rendered, not only to his county, but spoke feeling of the great sacrifice that he endured in his untiring devotion to his countrymen in their fight for freedom. Several of the members expressed the sentiment of the society, with reference to the high ideals and strict professional ethics that guided the doctor in his career and surrounded him with a large circle of sincere friends.

The President appointed a committee of three, composed of Drs. Sica, Haggerty and Ackley, to draw up suitable resolutions.

The secretary was empowered to arrange for a floral remembrance. Honorary bearers: Drs. Douress, Sista, Haggerty, Sica, Higgins and Connelly.

Another special meeting was held on February 4, for the purpose of taking action relative to Assembly Bills 71 and 161.

Following a discussion the secretary was instructed to draw up a letter embodying the principal features in the letter of Dr. Reik (relating the obnoxious points in these two bills), this letter to be printed on the stationery of the society, and at the suggestion of Dr. Scammell, 4 copies to be mailed to each member of this society for his signature and remailed in his personal envelope to each of our representatives at the State House, with such added comment as he might care to append.

The society went on record as unanimously opposed to such legislation, and authorized the secretary to so inform the representatives.

The society held its regular monthly meeting in the Carteret Club on February 10, President Comfort presiding. Drs. P. H. Corrigan and R. J. Cottone were elected members.

Dr. B. B. Vincent Lyon, of Philadelphia, gave a most interesting lecture, illustrated with slides, on the subject, "The Evolution of Early to Late Gall Tract Diseases, With a Brief Consideration of Its Genesis, Diagnosis and Treatment".

Dr. Lyon read a thoroughly scientific paper, and was well repaid by the very enthusiastic discussion that followed. Several of the members, particularly interested in this line of work, taking a very active part in the "round robin" that was created by this intensive study of the subject.

An enjoyable luncheon followed, about 50 members being present.

## MONMOUTH COUNTY.

D. F. Featherston, M.D., Reporter.

At the regular meeting of the Monmouth County Medical Society held February 25 in the Berkley-Carteret Hotel, a symposium on disease of the gall-bladder was given. The first paper of the evening was by Dr. John Maher, of Long Branch, on the "Surgical Treatment of Gall-Bladder Disease", which was followed by a discussion of the medical treatment by Dr. O. R. Holters, of Asbury Park. Dr. W. G. Herrman,

of Asbury Park, then took up the use of x-rays as an aid in the diagnosis of the condition, and Dr. C. A. Pons, of Red Bank, Pathologist to Monmouth Memorial Hospital, Long Branch, spoke of the pathology of the gall-bladder.

Discussion was opened by Dr. Harry B. Slocum, of Long Branch, who was followed by Dr. Frank A. Altschul, of the same city. The subject was then given to the meeting at large for general expression of opinion.

At the business meeting which preceded, the report of the committee on periodic health examination was accepted.

Dr. Joseph H. Byran, of Asbury Park, a member of the State Board of Medical Examiners, brought to the attention of the members several bills which are before the House and Senate and urged coöperation in that these bills were of vital importance to the profession. One bill in particular was brought up, which as introduced by Assemblyman Peter Dodd, of Neptune, has as its object the granting of license to practice chiropractic to men who are veterans of the World War and sons of Spanish War veterans without examination by the board. This, it was pointed out, would affect only 3 men in the state and it was considered by those present unwise to permit passage of such personal legislation.

A committee was appointed by the president, Dr. Harvey Brown, of Freehold, to confer with the Welfare Committee on legislative matters which effect the profession and to report at such time as the services of the entire body are needed; the committee consists of Drs. Joseph H. Byran, James A. Ackerman, James A. Fisher and O. R. Holters, all of Asbury Park.

At the suggestion of Dr. Earl C. Wagner, the county physicians are to be canvassed for application for membership in the county society as there are a few men scattered throughout the county who are not members of the organization; an effort will be made to bring them in.

A buffet lunch was served following the meeting.

#### PASSAIC COUNTY.

##### Ridgewood Medical Society.

H. S. Willard, M.D., Reporter.

The regular monthly meeting of the Ridgewood Medical Society was held at the residence of Dr. Chas. W. Harreys on Wednesday evening, February 17. Dr. William Spickers, of Paterson, was the guest of the society and presented a most interesting paper on "Local Anesthesia in General Surgery", stressing particularly the value of paravertebral and spinal anesthesia and detailing his methods of administration.

The paper was widely discussed by the members present and a vote of thanks was extended to Dr. Spickers for his excellent presentation of the subject and as appreciation of the original work he has done in this direction.

There followed a general discussion relative to the value, as a health measure, inoculation of dogs against rabies. The question is particularly trite with the members of the society because of the fact that the village of Ridgewood has for more than a year required by law the inoculation of all dogs before licenses are issued, and there is a movement on foot to repeal this law because of propaganda being spread throughout the northern part of the state by the opponents of vaccination and serum treatment generally.

The society went on record in a resolution to

the effect that the local Board of Health and Village Commissioners be requested not to repeal the present ordinance, and that it was the sense of the society that the inoculation of dogs against rabies was a public health measure of great value, and that the marked reduction in the number of cases of rabies in the village during the past 2 years was amply justification for the feeling that vaccination was of considerable value and should at least be given further trial.

There was an announcement made by one of the members to the effect that a charter for a hospital in Ridgewood has been obtained and that a Board of Governors has been selected to carry out plans necessary for the eventual establishment of a local hospital. The society expressed itself as in entire sympathy with the move and expressed the hope that the hospital would be an asured fact in the not far distant future.

The usual social hour followed, after which adjournment was taken.

#### UNION COUNTY.

##### Resolution on the Death of Dr. Cladek.

Whereas, It has pleased Almighty God in His infinite wisdom to remove from our midst our esteemed and beloved fellow practitioner Walter E. Cladek, we the members of the Union County Medical Society in special session desire to express our feelings in the following resolutions:

Be it resolved, That in the loss of Dr. Cladek the medical profession of Union County and the City of Rahway have lost a loyal friend, a sympathetic counsellor, a man of great integrity and beauty of character, and also one of unusual medical ability whose ideals and ethics were on the highest level.

Be it also resolved, That the community in which he worked and lived and where he has practiced medicine for nearly fifty years, giving unstintingly of his time, strength and talents, has suffered an irreparable loss. Whenever his services were desired, night or day, by rich or poor, they were cheerfully given; this first thought being the welfare of his patient. During his long professional life he has ministered willingly to those who were unable to compensate for his services except with gratitude.

Be it also further resolved, That the members of Union County Medical Society extend their heartfelt sympathy to the bereaved family in their great loss and that these resolutions be spread on the minutes of the Society and that a copy be sent to the local papers and to the family.

(Signed)

G. L. Orton,  
F. W. Sell,  
G. S. Laird.

##### A Blue Monday Novel.

"Will you marry me?"

"No."

They lived happily ever after.

—Wally Jay.

##### The Ruling Passion.

Doctor No. 1—Did you hold the mirror to her face to see if she was still breathing?

Doctor No. 2—Yes, and she opened one eye, gasped, and reached for her powder puff.—Sydney Bulletin.



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## SOME PHASES OF THYROID DISEASE.

FRANK H. LAHEY, M.D.,  
Boston, Mass.

I have selected for this discourse several clinical aspects of the goiter problem, particularly malignant degeneration of adenomas, intrathoracic goiter, the goiter which causes pressure, and, thyroid toxicity. We have seen in the clinic such a number of cases of carcinoma of the thyroid arising from carcinomatous changes in benign adenomas that we believe all adenomas in patients over 30 years of age should be removed as a prophylactic measure against the occurrence of this possibility. Of all the adenomas of the thyroid that we have seen, around 3% have shown malignancy on pathologic examination, and of those cases in which the malignancy had broken through the capsule at the time when the patient came to operation, not one patient is alive today.

The distinguishing clinical features of malignancy of the thyroid are its stony hardness, a consistency similar to that of the malignancy in the prostate, and a change in the mobility of the gland. The thyroid in its normal state is readily movable from side to side and may even be elevated from its bed by proper maneuvers. When, however, it has become malignant, there is firm fixation; the only motion being the ascent and descent of the gland with swallowing. There is but one other condition in the thyroid with which this feature is associated and with which it may be confused; that is lignous or woody thyroiditis. Loss of dis-

creteness is also a clinical feature of malignant degeneration, an adenoma which has previously been of definite outline fusing into the surrounding tissue with loss of its definition. When, also, an adenoma has existed benignly for some years with no change in the voice and then, with no apparent cause, hoarseness appears, one should seriously suspect the onset of malignancy; the loss of voice being due to penetration of the posterior capsule of the adenoma and involvement of the recurrent laryngeal nerve by the carcinomatous process. We have repeatedly stated our views regarding adenoma of the thyroid, as follows: Since a definite percentage of adenomas of the thyroid become malignant; since there are no clinical signs whereby one may diagnose this condition before it has ruptured through the capsule and involved the deep cervical glands and surrounding structures; and since, when the condition is recognizable clinically it is practically hopeless surgically; then, the plan of management of this condition is clear. All adenomas should be removed before they become malignant; that is, any adenoma, regardless of whether it presents symptoms, should be removed in patients beyond thirty years of age.

Cases of intrathoracic goiter rarely come to our clinic having been diagnosed by the attending physician, largely, I believe, because of a lack of familiarity with this condition and the clinical features which distinguish it. In every case of goiter one should carefully palpate for the lower poles of the thyroid on either side of the neck. If the lower limit of the thyroid on one side cannot be outlined, but continues downward to disappear behind

the sternum or clavicle, intrathoracic goiter should be suspected. The upper chest should be painstakingly percussed for that dulness which accompanies many cases of intrathoracic type in goiter of any considerable size or of nodular character. In all such cases, also, x-ray pictures of the upper chest should be taken to demonstrate particularly whether there is deviation of the trachea. Since most intrathoracic goiters are either cysts or adenomas of the thyroid, they rarely fail to be situated to one side or other of the trachea, and to cause that structure to deviate from its normal position in the middle line.

Patients with intrathoracic goiter may or may not show signs of tracheal pressure; a majority do, but we have often been surprised to observe what extensive intrathoracic goiters may exist without symptoms. When tracheal pressure with respiratory difficulty exists, it frequently appears intermittently, with intervals of comparative freedom from difficulty, the attacks being due very likely to changes in the size of the intrathoracic tumor secondary to mild infection or edema. Since these intrathoracic goiters often reach such size within the thorax that it is extremely difficult to extricate them from their position within the chest; since their removal entails opening and draining of the superior mediastinum, with the danger of mediastinitis; and, since they are prone to appear in the later years of life when the operation is not endured as well as in earlier years; we have urged not only the removal of all intrathoracic goiters before they become large, but removal also of all low-lying adenomatous, colloid or cystic goiters before they become intrathoracic in location.

Symptoms resulting from pressure by a goiter are largely respiratory in character, secondary to pressure-narrowing of the trachea or larynx. There have been a few cases in which patients complained of difficulty in swallowing which vanished with removal of the goiter, but they have been the exception. We have repeatedly seen deep intrathoracic prolongations of thyroid tissue, even with segments wrapped around the trachea; also complete intrathoracic adenomas located entirely within the mediastinum with no signs of esophageal obstruction.

In a similar way, although we have often seen adenomatous goiter insinuate itself beneath the great vessels of the neck, we have never seen cerebral symptoms secondary to pressure upon the great vessels. Dilatation of the superficial thoracic veins, on the other hand, has been frequently associated with intrathoracic goiter, due, no doubt, to interference with drainage of the venous tributaries of the thyroid into the internal jugular, or obstruction to the return flow of those veins, by goiter of such size as to fill the upper thoracic aperture and limit the space to be occupied by the internal jugular. Such dilated superficial thoracic veins are tortuous in character and spread over the anterior chest wall. In a few such cases, particularly when malignant in character, we have also observed edema of the face secondary to this venous back pressure.

Pressure upon the trachea or larynx is one of the most common of the complications of goiter. We have had the opportunity of observing all grades of this complication ranging from the very slightest degree up to complete obstruction with unconsciousness resulting from complete suffocation. This obstruction is due to bilateral collapse of the trachea, to unilateral tracheal collapse, to anteroposterior collapse, or to laryngeal pressure secondary to an encircling goiter.

Respiratory stridor is constantly associated with tracheal obstruction, varying from the very slight variety noticeable only by listening carefully and closely to the patient's intake of breath up to the labored crowing of the almost completely obstructed individual. We have seen the trachea so narrowed from side to side by the lateral pressure of bilateral adenoma that it was almost impossible to find an opening in the flattened trachea into which to introduce a tracheotomy tube. In the same manner, due to loss of resiliency and collapse of the tracheal rings, we have been compelled to insert lateral guy-stitches in either side of the collapsed trachea and into the sternomastoids on either side to hold the trachea sufficiently open to permit air enough to enter so that the patient could breathe.

One of the types of goiter often causing marked stridor is the encircling goiter, usually



of the colloid type and, so, frequently not suspected of causing respiratory obstruction. In this type the upper poles of the thyroid pass behind the larynx, overlapping each other and completely encircling that structure; then causing pressure from behind where the larynx is without a rigid wall to protect it from pressure.

We strongly urge that operation be immediately advised in any case of goiter showing any degree of pressure, no matter how mild. While the ability of the trachea to reopen and stay open after removal of the goiter causing pressure, is remarkable, the burden of a limited capacity for intake of air is a considerable one, and one which is borne badly by patients who are already handicapped, as these patients often are, by toxicity, age, or cardiac lesions.

We distinguish 2 types of thyroid toxicity,—primary hyperthyroidism or exophthalmic goiter, and secondary hyperthyroidism or toxic adenoma. Since we know of no physiologic evidence which indicates that there is but one secretion from the thyroid, we assume that both of these conditions originate from the same cause—hyperthyroidism—and that primary hyperthyroidism comes from excessive secretion of the gland itself, while secondary hyperthyroidism comes from an excessive secretion of the thyroid cells within the adenoma, and that primary hyperthyroidism may be cured by removal of four-fifths to five-sixths of the entire thyroid, and the other form by removal only of the adenoma. Having stated thus the difference in origin and in operative treatment, we may speak of toxicity as including both groups.

The diagnosis of thyroid toxicity in frankly toxic cases, for example with goiter, exophthalmos, tachycardia, tremor, and loss of weight, is of course simple. We wish, however, to speak more particularly of the less frank case, perhaps without exophthalmos, and goiter with uncertain tremor, often with little or no loss of weight. These are the patients often with markedly neurotic symptoms, without frank evidences of thyroidism, who tax our clinical astuteness to determine satisfactorily whether their symptoms are in part thyroidism and in part neurosis, or whether they are wholly neu-

rotic in origin. These cases are particularly trying since we know well from experience that markedly intense thyroid toxicity may exist in the presence of a thyroid of normal or less than normal size. It becomes doubly disquieting, however, if the patient has a goiter with marked nervousness together with tachycardia, and yet lacks the other convincing clinical features of the disease with which to make certain the diagnosis of hyperthyroidism, such as exophthalmos, loss of weight, tremor, irritability, sweating, etc. It is in those cases that one must be extremely critical, as operative procedures in such a neurotic case, if of nonthyroid origin, not only fail to improve the condition but actually intensify the symptoms. It is in such borderline cases that repeated basal metabolic estimations are of such great value.

Basal metabolism is an estimation of the heat production of the body, and hyperthyroidism is a disease associated with marked increase in heat production. It is clear, then, that basal metabolism estimations, if possible errors resulting in untrue basal metabolic estimations can be eliminated, are of very great importance in the diagnosis of this condition. In a review of 5200 basal metabolic estimations on 1600 patients, published by Dr. Sara M. Jordan, of our clinic, last year, we have arrived at certain definite conclusions, the most important of which is that we have not seen active hyperthyroidism exist in the absence of an elevated basal metabolic rate. The next one is that in the presence of hyperthyroidism and its associated increased metabolism, we have not seen a clinical cure of the disease except where the basal metabolic rate has come back to normal. These, we believe, from an extensive experience with the disease, are 2 dependable postulates in hyperthyroidism. In patients suffering from neurotic conditions which closely simulate thyroidism, we have frequently observed the first few basal metabolism tests to be elevated, due usually to an improper adjustment of the neurotic individual to the test and representing a false basal metabolic reading. We have found, however, in such individuals, that with the test repeated daily, the rate gradually comes to normal as the patient becomes accustomed and adjusted

to it until the reading represents a true basal rate. From the above facts, it is evident that careful basal metabolic readings, with the patient in the hospital and with the test repeated daily for several days, are often largely the determining factor as to the presence or absence of thyroidism in the borderline neurotic cases without convincing clinical evidence of thyroid toxicity.

In the diagnosis of thyroid toxicity, we wish again to stress particularly the fact that the most intensely toxic thyroid patients whom we have observed have not had any goiter. A very large percentage of the cases of primary hyperthyroidism or exophthalmic goiter which we see have a thyroid gland of only average or normal size. A definite number have a gland which is smaller than normal. Exophthalmos is often entirely absent but staring or fixation of the eye in some degree is rarely absent. Tremor when present is coarse, as a rule, and quite characteristic. It is often not present characteristically in borderline or less intense cases. Tachycardia, except in the patient seen in bed and after a period of rest, is rarely absent, and based upon an average, determined from the day-to-day rate, is approximately in proportion to the intensity of the intoxication. One should be careful, however, to recall that resting rates do not represent average rates as related to normal activity.

There are many secondary features of the disease, a history of which either in the present or past is of value in arriving at a diagnosis of this condition in doubtful cases, such as changes in the disposition to one of irritability, unexplained losses of weight, often in spite of a good food intake, myasthenia, an increased feeling of heat, changes, largely a lessening, in menstrual flow, and a history of repeated so-called "nervous breakdowns". These suspicious clinical indications in the doubtful cases, plus a persistently elevated basal metabolic rate, justify diagnosis of the disease and permit one with reasonable assurance to urge the relief of symptoms by surgery.

Regarding the treatment of thyroid toxicity, we know of no drug, including iodine, which will lower the basal metabolic rate to normal

and keep it there, and this is the critical and essential test of the cure of hyperthyroidism. There is, therefore, in our opinion no drug treatment which may even occasionally be expected to cure hyperthyroidism. The test of cure which we have set for surgery is that it must relieve symptoms and reduce basal metabolic rates to normal and maintain the rate at normal for at least a year. As we have stated above, it has been our experience that if the basal rate is not lowered to normal and maintained there, clinical symptoms of the disease do not entirely disappear and it becomes evident that an insufficient amount of thyroid tissue has been removed and more must be taken out. Medical treatment of thyroid toxicity, other than drug treatment, is based almost solely upon rest; diet, other than being sufficient in calories to meet the increased demands of metabolism, playing little if any part in cure. Rest, in the treatment of thyroidism, is of value largely through diminishing combustion by limiting the need for heat production. It protects the heart from the ill effects of excessive rates, although in severely toxic cases rapid rates persist in spite of complete rest. Medical rest is for the most part a disappointingly expectant form of management of thyroidism. We have operated upon 3200 goiters now, and of the toxic cases few have failed to have tried the effects of prolonged rest without success. It is a passive, largely futile, and at times dangerous form of treatment. Rarely does a year go by that we do not see patients who have been put to bed while in a stage of thyroid intoxication which would have permitted of subtotal thyroidectomy with safety, yet who during their resting period have gone on to such stages of marked intoxication that death resulted. One must recall that thyroidism is characterized by remissions of the disease and that care must be exercised lest a natural remission be attributed to one of the valueless methods of treatment.

X-rays and radium, in the treatment of this disease, are not to be classed with surgery, because of their high percentage of failures to cure, the high percentage of recurrences in the cases relieved, and the lack of any definite knowledge of the amount of thyroid tissue which is prevented from functioning and the



proportion which continues functioning under this form of treatment. It is further of disadvantage in that it does not determine the type of tissue or goiter dealt with and does not discover retrotracheal, retrolaryngeal and, in many cases, intrathoracic goiters as does surgery.

Since toxic goiter can so rapidly become converted into such a serious state that there is very grave danger of the patient dying in spite of any form of treatment; since, as we have shown and I will speak of later, persistence of thyroid toxicity, particularly in patients past 40 and in any patients with a heart which is at all damaged, predisposes to auricular fibrillation and, as a consequence, cardiac decompensation; and since these complications definitely increase the risk in the case; then, as we have often stated, the best form of treatment for this condition is the one which most quickly, most certainly, most completely and most permanently removes the toxicity. We are convinced that all forms of treatment for this disease other than surgery fall far short of these requirements.

We have, through the work of Dr. B. E. Hamilton, the cardiologist to our clinic, described and discussed in the literature a group of toxic thyroid cases associated with congestive heart failure which we have termed thyrocardiacs. This we believe is one of the most striking of all the thyroid groups, and one in which surgery offers the most brilliant possibilities, converting, as it so frequently does, the absolute cardiac irregularity which often accompanies thyroid intoxication, to regularity, and restoring, as it also does so often, to full ability those patients who had associated thyroidism and cardiac decompensation. Dr. Hamilton has repeatedly stated that there is no parallel situation in cardiology whereby it is possible by means of a surgical operation to remove a burden which drives the heart so hard and which is so well calculated to produce auricular fibrillation and cardiac decompensation.

Rapid rate predisposes to auricular fibrillation; auricular fibrillation plus rapid rate, shortening the intervals or rest periods of the heart, predisposes to decompensation. We wish to urge particularly that any patient with

congestive heart failure and goiter, or any patient with congestive heart failure and any of the stigmas of goiter in the present or past, be most carefully searched for the possibility of the association of thyroidism with these lesions. A great number of these thyrocardiacs, in our experience, have come to the clinic undiagnosed, due to the fact that the congestive failure so completely overshadowed the picture of hyperthyroidism that this condition was not thought of. These cases are also made more difficult to diagnose by the fact that they frequently have no goiter and are apathetic rather than activated, as is usually the case in hyperthyroidism. Careful observation, however, will reveal some of the clinical features of thyroidism, and basal metabolism will, when it is possible to employ it, show a persistently elevated rate.

Surgical treatment of these cases has shown a remarkably low mortality. We have now operated upon over 125 cases of thyroidism and congestive heart failure with but 3 deaths. A majority of the cases, following removal of the thyroidism, have regained their compensation to such a degree as to be able to earn their living and to go about their daily affairs. It is indeed a most gratifying group,—those breathless, bed-ridden, edematous individuals, restored to active, capable and reasonably normal persons.

Before closing my remarks regarding thyroid toxicity, I wish to say a few words about the employment of iodine in the treatment of goiter.

There are certain basic facts about the use of iodine in goiter which it would be well for any one to have in mind, and they are as follows: Iodine is of value in goiter only in 2 conditions: (1) As a prophylactic measure against the occurrence of endemic goiter, particularly in children in a region where goiter is prevalent, as along the Great Lakes front and in the Middle West. In such a situation, but very small doses of iodine should be employed, 2 gr. of sodium iodide in a week every six months. This has been shown by Kimball and Marine to be sufficient to protect against goiter and more than this is of no value and may do harm should there be adenoma within the glands of those taking larger doses over longer periods

of time. (2) Iodin is of value in preparing exophthalmic goiter cases for surgical procedures. It is not a curative measure. It should definitely be borne in mind that Lugol's Solution, or any other form of iodine, does not bring about a cure in exophthalmic goiter. Our experience with it is that for a period of about 2 weeks it produces a definite improvement in the clinical symptoms. For the next 2 weeks there is no further progress in the improvement, and following that the intensity of the symptoms returns to the level at which they were previous to administration of the iodine.

Lugol's Solution is given in doses of 10 drops 3 times a day, with the patient in bed at rest, usually for 8 to 12 days previous to the operation. As a rule, within this time the patient has made as much gain and the basal metabolism has been lowered as much as it will be lowered by the treatment. The dosage is continued immediately after the operation and continued for 1 month after the patient leaves the hospital, to protect against possible return of the hyperplasia.

Dr. Cattell, of our clinic, in a recent paper on the effect of iodine on thyroid tissue, has demonstrated, as was first shown by Dr. Marine, that the effect of iodine on the hyperplastic thyroid tissue of exophthalmic goiter is to convert it to the colloid or resting type. This, he has demonstrated, actually occurs in 87.9% of cases. He has demonstrated also, however, that the functional action of the gland is not accurately correlated with the histologic picture, as toxicity, as proven by clinical signs and basal metabolic rates, still persists even when the gland shows, microscopically, complete regression under the administration of iodine.

We wish to protest strongly against the promiscuous use of iodine as it is now employed, and we wish to recall to your minds forcibly the fact that in nontoxic adenomatous goiter the use of iodine is distinctly harmful, converting many of these simple adenomas into toxic adenomas, as demonstrated by Kocker many years ago. Iodine can not be administered safely unless one is sure that he is not dealing with an adenomatous goiter.

Few goiters now come to our clinic without having had iodine in some form before entrance,

and most cases are upon iodine feeding at the time of entrance. This is a distinct disadvantage, depriving us of the immediate pre-operative benefit which is obtained in the exophthalmic case which has not had iodine and, on the other hand, so clouding the clinical picture in borderline cases that definite decisions can sometimes be reached only after the patient has been off iodine for some time, a situation similar to the doubtful myxedema case upon thyroid extract feeding.

We strongly urge that iodine be not employed in toxic goiter until the type of goiter be determined by one who is capable of ascertaining its type with reasonable certainty; that borderline cases shall not be fed iodine until the diagnosis is settled; and that in patients sent for operation, unless the case be a desperate one with death threatening, the use of iodine be deferred until in the hands of the surgeon who is to operate.

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## THE VALUE OF THE X-RAY IN DIAGNOSIS.

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During recent years, each department of science in our medical laboratories has contributed much to make diagnosis more accurate and therefore treatment, whether medical or surgical, more intelligent.

In this advancement the x-ray has played an important rôle. The perfecting of modern transformers, Coolidge tubes, the Bucky diaphragm and improved fluoroscopes, together with the new screens and rapid films, have added new possibilities in Roentgen ray diagnosis, so that structures which were formerly not visualized can now be outlined.

That the x-ray is indispensable in fractures and dislocations is now an established fact and only requires mention. Yet, we often examine a part carefully, and finding none of the cardinal symptoms of fracture, such as deformity, over-riding or crepitus, are content to make a diagnosis of sprain until the roentgenogram (which should be taken in at least 2 directions)



discloses a subperiosteal fracture; we then realize the importance of raying all questionable injuries. It has been my practice whenever possible to set fractures under the fluoroscope. But the fluoroscopic examination of a bone without the making of films is inadequate and should be decried, as a subperiosteal fracture will thus frequently be missed; and furthermore, there is no permanent record which affords much protection in medicolegal work. The fluoroscope is most useful in locating and also in extracting foreign bodies; this latter can often be accomplished under the screen.

In the diagnosis of osteomyelitis during the acute stage, the x-ray is practically useless. It is not until the disease has advanced to bone destruction and sequestras are formed, that the shadows appear on the films. In subperiosteal inflammations, a soft skiagram may show the separation of the periosteum, which is a great help to the surgeon in the localization of the exact area involved. Tuberculosis of the bones, syphilitic lesions, malignancy, callus formation and rachitis can be demonstrated by carefully made films. Localization of focal infection has been greatly simplified by use of roentgenograms of the teeth, sinuses and antrums.

I am inserting a paragraph here which is a digression from the subject, relative to the ownership of x-ray films. To whom do the films belong? If a person is referred to a pathologist no demand is made for smears or other pathologic specimens. The pathologist makes a report which is considered sufficient. You have all had patients come to you with a set of films which had been taken at some laboratory and delivered to the patient. They are usually of a neurotic class who display the films before first one and then another physician for interpretation. They tell you that Dr. Smith said this, and Dr. Jones said that, while the doctor who made the films told them something entirely different. Dr. Trostler of Chicago, in an article in the May number of the Radiological Review, contends that radiograms are a part of a laboratory record. The French Government, in 1916, forbade the delivery of roentgenograms to wounded soldiers. If in the case of bone work a roentgenogram is mailed to a physician for reference, it should

be returned to the radiologist for filing, so that his records may be complete.

A statement by Dr. W. T. Mayo, that only about 1 person in 10 with gastric symptoms has a gastric lesion, is worth remembering. In other words, 90% of our cases of indigestion are of extragastric origin.

The Roentgen ray offers much in differential diagnosis, whether the cause be focal infection in the sinuses and teeth, aneurysm, pleural, pulmonary, mediastinal or cardiac disease, eventration, renal or vesical calculi, diseased gall-bladder or appendix, or a diverticulum, a systematic x-ray examination will always aid the clinician in locating the offender. It is necessary to bear in mind that radiology alone, without careful history and physical examination, will often lead to error. When we are examining a patient clinically, we should call upon the x-ray laboratory just as we do upon the chemical or pathologic laboratories.

Dr. Carmen, the noted roentgenologist of the Mayo Clinic, says that there are 3 possibilities, namely: (1) Each clinician should make his own x-ray determinations. (2) The clinician and radiologist should make a joint examination or go over their respective findings at a personal conference. (3) The clinical findings should be submitted to the roentgenologist so that he may correlate his findings with all other data. If one of these methods is not used gross error results, and the x-ray is unjustly criticized. For example, a clinician receives a report from the x-ray laboratory, of a gastro-intestinal examination to the effect that: The stomach is of a fish hook shape; position, normal; mobility, limited; motility, of 3 wave type; a one-third 6 hour retention; filling defect of duodenal cap. Unless he is acquainted with the work, he would know little more than he did before the examination. The history and clinical data together with the gastric, fecal and blood analyses, would establish the diagnosis.

In a brief way I will describe the technic used in conducting a gastro-intestinal examination, that the value of these findings may be better appreciated and understood.

The night prior to the examination the patient is given a laxative, preferably castor oil. Salines, while they cleanse thoroughly, cause

more gas and are therefore not satisfactory. In the morning a 6 hour meal is given according to the method of Haudek, consisting of 60 gm. of a cooked wheat cereal and 60 gm. of barium sulphate, to which skimmed milk and sugar are added to make the meal more palatable. Cream, being a fat, retards digestion and should therefore be removed. At the end of the 6 hours the patient reports for examination. In gastro-intestinal work much more can be accomplished by fluoroscopic than by film work, but both are necessary. In a series of 24 films, as was the former practice, with a one-half second exposure, the gastro-intestinal tract is visualized only 12 seconds, while with the screen it may be safely viewed for 10 or 12 minutes. Filling defects which might appear in each film may be obliterated by pressure or massage over the abdomen while the fluoroscopic examination is being made. The mobility of the stomach and intestines can be determined; also the phenomena of peristalsis and anti-peristalsis.

The patient is placed behind the screen in a dark room. A period of 8 to 10 minutes is necessary to produce proper dilatation of the pupils before the roentgenologist should begin work. The red light is used when necessary. This tires the red reflex and makes the green light more distinct.

The chest is first examined, noting the movements of the ribs and diaphragm, the position and size of the heart and aorta and mediastinal shadows, or any pathologic shadows in the lungs or pleura. As the screen is lowered and the abdominal contents viewed, the presence or absence of any residue in the stomach from the 6 hour meal is next determined; the normal stomach should be entirely empty at this time. The position of the head of the meal in the intestinal canal should have reached the cecum and not advanced beyond the hepatic flexure.

The screen meal which has been previously prepared is now given. This consists of 120 gm. of barium sulphate in a suitable vehicle—such as malted milk or water—to which has been added 4 gm. of bicarbonate of soda. This is given to reduce gastric acidity and thereby relax the pylorus. The quantity should be from 250 to 700 c.c. As the meal is swallowed

its course through the esophagus is carefully watched for the presence of any deformity of contour, obstruction, cardiospasm or diverticulum. When the stomach begins to fill it is necessary to make many observations, and have them recorded at the time they are made, so that a complete description can be filed for reference when going over the findings in summarizing the case. First the position, form and size of the stomach are noted. From x-ray examinations it has been determined that all these vary normally in different individuals, depending on the habitus. A very satisfactory classification of habitus has been made by Dr. Walter F. Mills of the University of Washington.

Mills describes 3 types, and I will define these because they are of advantage to the clinician as well as the radiologist: (1) The hypersthenic; robust frame, great body weight and musculature, deep thorax, ribs running almost horizontally, with obtuse epigastric angle, and stomach located high in the abdomen and of steer-horn type. (2) The asthenic or habitus enteropticus; in distinct contrast to the former; this shows weak, spare musculature, long chest, acute epigastric angle, the stomach low and usually of fish hook shape. (3) The sthenic or normal habitus; resembles the hypersthenic but the characteristics are less prominent and the stomach is high and tone good.

It is therefore seen that the stomach must vary with the habitus of the individual, and a normal position in an asthenic patient would amount to a ptosis in a hypersthenic case. These variations will likewise apply to the form and size.

The tone of the stomach is noted, and is divided by Schlesinger into 4 classes—hypertonic, orthotonic, hypotonic and atonic. The contour is carefully observed, watching for any irregularity, filling defect or niche. The shape of the gas bubble assists in visualizing the upper pole. The mobility is determined by manipulation, bearing in mind that the stomach is supported by the esophagus and gastraphrenic ligament at its cardiac end, and the hepatoduodenal ligament just beyond the pylorus. There is probably no part of the examination as fascinating as watching the phe-



nomena of peristalsis, and through its study, much can be learned of the efficiency of the stomach.

The escape of the meal past the pylorus and the filling of the duodenal bulb is an important index, not only to gastric and duodenal pathology, but to gall-bladder disease with adhesions and distortions. Since most lesions, whether benign or malignant, of the upper alimentary canal occur in this neighborhood, determinations of major significance can be made by use of the palpatory manipulation during the fluoroscopic examination.

At the end of 24 hours the patient returns for further observation of the intestinal canal, when obstructions, diverticuli and chronic appendices are often visualized. In some cases more frequent observations are necessary; in others, a complete reexamination. This is especially true when the patient is nervous, and an apparent pyloric stenosis may prove to be only a spastic contraction which disappears after the administration of belladonna or bromides. Opaque enemas are used in examining the colon and sigmoid for obstructions.

During the past year a valuable work has been done in studying the gall-bladder by the intravenous use of the tetrabromide. These experiments have occasioned several untoward results, and for this reason I have not subjected any patients to this procedure. The tetra-iodophenolphthalein sodium salt is now receiving much attention as it has thus far been attended with less danger and more opacity. I am using it in pills made for oral administration.

Much has been accomplished in genitourinary radiology by injection of the ureters with sodium iodide. This can only be done by the combination of cystoscopy and radiology. For this reason the work is confined to hospitals, where urologist and radiologist can work coöperatively.

My purpose in this paper has been:

(1) To emphasize the importance of x-rays in diagnosis.

(2) To impress upon you the advisability of having radiograms made of all suspicious injuries.

(3) To mention the advantages of fluoroscopy in combination with radiology.

(4) To show you the necessity of correlating clinical and other laboratory findings with the x-ray determinations before offering a diagnosis.

(5) To briefly outline the technic of chest and abdominal examinations, that you may better appreciate the advantages of routine x-ray analysis in obscure cases.

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## THE DIAGNOSIS OF TUBERCULOSIS.

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The diagnosis of tuberculosis is a very important subject. My good friend and colleague, Dr. Pollak, often refers to it as "The Tuberculosis Problem". Tuberculosis is indeed a problem, and we in institutions, who are engaged with the many phases of tuberculosis from day to day, consider tuberculosis as one of the most serious problems confronting the medical profession, not only from the standpoint of diagnosis and treatment, but with complexities in its economic and domestic relations.

Statistics clearly indicate that there is a subsidence in case incidence of tuberculosis. However, there are still many cases of tuberculosis that will require our close attention. We, as physicians, know that tuberculosis is quite different from other diseases. It has its distinctive characteristics. The most important of these characteristics, and one which is often lost sight of, is the insidious nature of the disease, and in most cases, the gradual onset whereby it installs itself by stealth. After cavitation and expectoration of large quantities of tubercle bacilli laden sputum, pulmonary hemorrhages, and other classical symptoms which accompany this malady, the diagnosis in most instances is an easy matter. The majority of tuberculosis cases are not diagnosed until much structural changes and tissue involvement have taken place. A fact

worth constant repetition is that: "the detection of early lesions materially enhances the probability of the patient's recovery".

Although tuberculosis is pathologically dissimilar from other diseases, a differential diagnosis is often difficult to make. The process of repair, the formation of fibrosis and deposition of calcium in the pulmonary lesions are within themselves characteristic, and offer many interesting phases in the study of this phenomenon. It is unfortunate that many of our cases of tuberculosis are seen only after pathologic changes are such as to relegate them to moderately advanced and advanced cases. The patient himself often does not realize that he has anything other than a bad cold and therefore delays a physical medical examination by a physician until there have developed progressive tissue changes.

There are also wide variations in x-ray and laboratory examination results, and while positive sputum is indicative, a negative sputum may be present in an active case of tuberculosis with extensive involvement and may be very misleading. There is remarkable assistance rendered by x-ray examinations, but we must not overlook the fact that the early lesions may not be apparent in the x-ray findings.

The early case of tuberculosis is the most difficult patient with whom the doctor has to deal. He does not realize, nor can we expect him to appreciate the pathology of tuberculosis and the subtle destructive progress accompanying this disease. Therefore, it is necessary to consider tuberculosis especially from a psychological standpoint. It requires the greatest amount of patience and tact on the part of the physician to gain the confidence of the patient to such an extent as to admit of proper treatment. The patient, and the ones interested in the patient, should be given a frank opinion. However, there can be no stereotyped directions for the amount of detailed explanation for a given case, each patient requiring separate study and individual consideration.

One of the greatest obstructions to the early diagnosis of tuberculosis is the attitude of the patients themselves. They do not seek nor permit an examination as early as desirable, and after an examination has been made, the majority of patients openly or passively rebel

against the suggestion of a possibility of tuberculosis. Parents, relatives and friends usually doubt the diagnosis, or will not permit themselves to believe that a patient has the condition the doctor describes. Just how to diplomatically reveal to the patient, or to the members of his family, the possibility or likelihood of tuberculosis is a tedious and tactful undertaking, requiring the utmost courage, frankness and diplomacy.

We, who are accustomed to seeing the many terminal cases of tuberculosis that present themselves to the sanatorium, are impressed with the *outstanding* fact that the vast majority of patients will do anything and everything possible to have some one reverse a diagnosis of tuberculosis, and will welcome the least sympathetic element of doubt as to their condition. To gain this much-desired reversal of the diagnosis (which they view as a sentence passed upon them and theirs) they will disregard their physicians entirely, and employ various methods to secure a favorable expression as to their condition. Then they begin to search for some one to tell them that they do not have tuberculosis, but they have "indigestion", "run-down condition" or, "a weak spot on the lung". The history of these patients will almost invariably reveal that in the beginning their doctors had truthfully told them they considered that the patients had tuberculosis or they feared that tuberculosis might be an underlying condition responsible for their symptoms; whereupon, the physicians are often summarily discharged, and the patients proceed to consult others in quest of a favorable diagnosis and prognosis, which they frequently obtain from a chiropractor or some other member of the cults who will assure the patients that they do not have tuberculosis and that the doctors do not know what they are talking about. A goodly fee often awaits this unethical one. These cases finally find their way to county and state institutions, with advanced tuberculosis and, usually, with their financial savings exhausted and with little hope for recovery.

We cannot deny that this is a matter of grave concern. I, personally, believe that the situation should be seriously considered in all medical societies, whereby there could be an



agreement reached expressing the consensus of medical opinion concerning the diagnosis and prognosis of early tuberculosis. By such means a frank expression and description could be given a patient who has a suspicious bronchitis, cough or indigestion, or some of the other manifestations of tuberculosis, and the physician giving the same would feel that a like opinion would be given in cases that warranted it by other physicians who might be consulted, thus protecting the patient and safeguarding the interests of the medical profession.

Tuberculosis is a communicable disease, and with that knowledge, it is gratifying to receive statistics from many sources that tuberculosis is surely and gradually being conquered.

On account of the incubation period of active tuberculosis being so variable, who knows when tuberculosis infection becomes active tuberculosis? In light of our present knowledge of communicable diseases, we know that segregation and isolation does not mean what it once did. It does not demand that the patient be banished from the activities of life, or confined to a pesthouse. In many cases, home treatment can be secured and, under proper regulations, without danger to the other members of the family. Where this is not possible and where it is convenient, every case of tuberculosis should have sanatorium care and treatment, and have opportunity to profit by the educational rules of proper living gained by their experiences there. Social life in institutions can be made, and should be made, so attractive that every one will be content to remain and not consider themselves exiles. Notwithstanding the fact that to the physician the prognosis may be doubtful, and the members of the family made to understand the gravity of the disease, every hope and assistance should be held out to the patient to stimulate the "will to win".

It is sad to relate that there is no specific medical cure for tuberculosis. Many therapeutic applications are available for relieving the symptoms and improving resistance and favoring factors that have to do with fibrosis and calcifications, resulting in arrested cases. Climatology is an intricate study with many complex phases. That humidity, elevation and

other atmospheric conditions will affect human beings, sick or well, favorably or unfavorably, we cannot deny, but the change of climate and higher altitudes have been much over-rated, and occupy a place of greater importance in the minds of patients than they rightly deserve. There is a phase of climatology, however, that we can use to the fullest extent, depending upon the facilities at hand in any given case, and that is sunlight. Sunshine and artificial sunlight rays, direct and diffused, are beneficial; the method and manner of its application to be determined by the case in question. Heliotherapy gives us the greatest promise in the arrest of this disease, and the amount of improvement in certain types of tuberculosis is really marvelous. In pulmonary tuberculosis, its true value is as yet undetermined. In any case the general nutrition and well-being of a patient is stimulated and improved by air and sunlight exposure. Care must be used in this treatment with advanced pulmonary cases.

It is our mission, and I will grant you a job of work, to properly inspire the patients and imbue them with a "will to win", and have them use for their slogan: "A winner never quits and a quitter never wins".

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## PREVENTION OF RICKETS—A PUBLIC HEALTH PROBLEM.

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Recent studies have shown that rickets is very common among young infants. This is particularly true among those children who are born during the latter part of summer or early fall. Among all who live in the temperate zone, it has been found that rickets rapidly increases during December, January and February. This condition is not peculiar to the poor nor to the malnourished or undernourished infant. It is frequently found among babies who on superficial examination would be considered in perfect condition. It is not uncommon among very wellnourished, breast-fed babies

during the winter months. Very careful studies made during the past year have shown that rickets begins much earlier than is generally thought. It is not at all uncommon to find clinical signs by the third month of life, and by the use of more exact methods such as chemical examinations of the blood and x-ray examinations of the bones, the existence of rickets has been determined by the first month of life. It has been found that rickets is most likely to develop during periods of very rapid growth. It is very common in premature babies. It is not frequently found in marasmic infants with stunted growth. Inasmuch as the greatest impetus for growth is in the latter months of pregnancy and the first 6 months of life, it is easily understood why these periods show the greatest incidence of rickets.

Rickets is a serious disease more from a public health than a medical standpoint. In its mild form it does not make infants acutely ill but predisposes them to certain defects in development that interfere permanently with good health and vitality. In early infancy it is the underlying cause of convulsions. Among babies who have been protected against rickets convulsions are exceedingly rare. It produces soft bones which, as soon as they are required to bear weight, become deformed. The deformities that have a particularly serious effect on health and life are those of the chest and pelvis. Obstetricians have long recognized that a rachitic pelvis has been the cause of much of the difficulty of labor and, therefore, bears an important relation to our maternal mortality problem. Studies are being undertaken to determine the incidence of rachitic pelvis. There is a strong impression that this condition is much commoner than is generally recognized and that the maternal mortality problem will in part be solved when rickets is prevented in infancy.

The teeth are similar in structure to the bones and naturally are similarly affected by nutritional disorders. There is a growing opinion that defects in development, irregularity in shape, size and position are closely related to the calcium deposition in the teeth before they have erupted. There is an increasing weight of opinion, based on careful animal experimentation, that caries of the teeth is primarily the result of defective structure and only sec-

ondarily the result of infection and fermentation of the mouth. The embryonal formation of deciduous teeth begins about the fifth month of pregnancy and the development of the secondary set is most active before the fourth year. A disturbance in the calcium phosphorus metabolism in the mother during the latter months of pregnancy in the first place causes a marked strain upon the calcium of her own tissues, in order to maintain the calcium requirements of the growing fetus. If the supply remains inadequate, it interferes with the proper development of important organs and tissues in the infant. Inasmuch as rickets begins as early as the first month of life and is most active when not properly controlled in the first 2 years of life, it is obvious that the teeth, which are undergoing their full development during this period, would be most seriously affected. While there is no desire to discourage propaganda for clean mouths and clean teeth, experimental and scientific research proves that to prevent carious teeth it is important at all times to maintain the healthy and normal structure of the teeth, which is determined largely by calcium deposition.

Rickets is easily prevented and easily cured. It does not occur among children who are adequately exposed to the direct rays of the sun. In China, where famines are common and children die of marasmus, rickets is rare. While rickets is very common among the negroes living in northern temperate zones, it is practically unknown among the negroes of Africa. It has developed very rapidly in the temperate zones among civilized nations because civilization has meant clothing and the shutting out of sunlight through crowded housing. It has long been known that cod liver oil would cure rickets. It contains an antirachitic element which gives it the same effect upon the calcium metabolism as sunlight. It has definitely been proven that the administration of small amounts of properly standardized cod liver oil will prevent rickets or readily cure it. The antirachitic element of cod liver oil varies considerably, depending upon the time of the year in which the fish are gathered, their own condition and many other factors. It has recently been thought that the cod liver oil of the Norwegian variety, which for a long time was considered of very fine



quality, was not as effective as fresh, nearby oil, because it was sent in casks partly filled with air and during transit the antirachitic element becomes somewhat changed, perhaps oxidized. This is being modified and cod liver oil is being sent over with the cask filled partly with nitrogen. It is important, therefore, in ordering cod liver oil to specify a known, carefully assayed brand, several of which are produced by American manufacturers from fish gathered off Cape Cod and Newfoundland.

With the recognition that rickets is so general and can be definitely prevented by the feeding of cod liver oil, it would seem desirable to treat cod liver oil as a food rather than a medicine and to make it a part of an infant's diet in the same way as orange juice is made part of the diet to prevent scurvy. With the recognition of the importance of the direct rays of the sun, particularly during the latter months of fall and winter, it becomes increasingly important to expose part of the body, even for short periods of time each day throughout this period. That this is not entirely impractical in this part of the country on account of the cold, I have been able to demonstrate by having mothers expose a portion of the infant's body as early as 1 month of age for periods of time varying from 5 to 30 minutes through the winter. This is best done in a room with direct southern exposure. It can be begun with the arm or leg for 3 minutes exposure and then increased each day by a few moments. The importance of the direct exposure is clear when we consider that the ultra-violet rays of the sun, which are the only rays that seem to be effective in preventing and curing rickets, are easily absorbed by glass and do not penetrate very deeply and, therefore, are made ineffective by coverings.

We have, then, in the prevention of rickets a very definite and important public health problem. No child should be permitted to acquire rickets through inability of the parent to supply it with either cod liver oil or sunlight. Until mothers are educated to the importance of these factors, it may be desirable, through clinics and baby keep-well stations, to distribute cod liver oil. The cost would indeed be a small sum for the prevention of all the serious defects and deformities that follow in the wake of rickets.

## THE CHIEF CAUSES OF UTERINE HEMORRHAGE, AND THEIR TREATMENT.

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(Summary of an Address before the Atlantic  
County Medical Society.)

A discussion of the symptom of uterine hemorrhage must of necessity make more points of contact with the field of gynecologic pathology than any other which might be selected. In a general way we have been accustomed to consider abnormal uterine bleeding under 2 heads, menorrhagia and metrorrhagia. In the case of the former, the excessive menstrual hemorrhage obviously represents an aberration of the normal menstrual mechanism. A familiarity with the modern conception of menstrual physiology is a *sine qua non* to a proper understanding of the mechanism involved in the abnormal types. Menstruation is, in itself, a form of uterine hemorrhage, representing the only example in the body of a perfectly physiologic type of hemorrhage. In cases of intermenstrual bleeding the fundamental importance of a knowledge of the normal physiology is not quite so obvious, or perhaps so great as with menorrhagia, but even so it may be accepted that it forms the natural point of departure in the study of all menstrual disorders.

It would be interesting, if time permitted, to review the advance in our knowledge of the menstrual phenomenon from the early era of superstition and folk lore up to the present day. Certainly it may be said that more real knowledge on this subject has been acquired in the past quarter century or so than had been accumulated in many centuries preceding. The basis of our present day conception is that menstruation is due to an internal secretion produced by the ovaries. There is still much discussion as to the constituent of the ovary responsible for this secretion. There is little doubt that both the follicles and the corpora lutea are important in this respect. Each month, at about the thirteenth or fourteenth day of the menstrual cycle, i.e., about 10 days after the average menstrual cycle, a mature

Graafian follicle discharges an ovum, which soon enters the tube and begins its passage toward the uterus.

In the meantime the endometrium begins to prepare for its possible implantation by undergoing a slow developmental process, so that it is never the same 2 days in succession. This gradual hypertrophy is almost surely due to the endocrine influence of the growing follicles. In the meantime the follicle from which the ovum escaped has become a corpus luteum, which now likewise begins to grow larger and larger, becoming mature several days before the date of the next period. At this time the endometrium, under the influence of the corpus luteum, undergoes a striking transformation, showing for the first time definite secretory activity, with thickening edema and increased vascularity are marked. In other words, it is very much like young decidua. The purpose of this change is evidently to prepare for the reception of a possibly impregnated ovum. If the ovum has indeed been fertilized, the hypertrophic endometrium remains and becomes real decidua. If, on the other hand, the ovum dies before fertilization, the corpus luteum at once begins to retrogress and the endometrium is in large measure cast off, with the accompaniment of hemorrhage. Menstruation is thus to be looked upon as a dismantling process evoked by a failure of fertilization of the ovum.

One of the really epochal contributions of recent years was the demonstration by Hitschmann and Adler that the endometrium passes through a remarkable cycle of histologic changes at different phases of the menstrual cycle. We now know that histologic pictures which were formerly considered distinctly pathologic are merely normal variations, and without a familiarity with these physiologic variations one would be at sea in the microscopic examination of curettings.

In a previous paper I suggested that cases of abnormal uterine bleeding might from the standpoint of etiology be grouped under 3 heads, as follows:

First, those due only to definite anatomic disease in the pelvic organs. This group is best represented by such destructive lesions as cancer, in which the bleeding is due to ac-

tual breaking down of tissue and opening up of blood-vessels. In other words, it occurs irrespective of the physiologic factor of menstruation, being due to the same factors which cause bleeding from cancers in other parts of the body.

Secondly, we have cases due to combined anatomic and physiologic factors. There is a large group of cases in which bleeding, as in the group just considered, is associated with the presence of definite pelvic lesions, which obviously are of some importance in causing the symptom. On further study, however, it will be seen that some additional factor, and that a physiologic one, must be invoked to explain the bleeding. The best illustration of this type is furnished by the ordinary form of chronic pelvic inflammatory disease. The statement has usually been made that this condition causes bleeding because of the pelvic congestion which it entails. If this alone were sufficient, however, one would expect to have bleeding more or less continuously, which is certainly not the rule. Furthermore, in the most acute forms of inflammatory disease, where the congestion is most intense, menstruation is not only not excessive, but may be absent altogether. Recent studies have seemed to indicate that the cases in which bleeding is present are those in which the ovaries are definitely involved in the disease, and that the bleeding is therefore in part at least of functional nature. In other words, both structural and functional factors are here concerned.

Thirdly, there are cases in which the bleeding is due to a pathologic physiology alone. In the majority of cases of abnormal uterine bleeding, pelvic lesions are to be found, so that the first 2 groups are certainly the most numerous. This is contrary to the findings with amenorrhea, where a constitutional or endocrine factor is much more frequent than a local one. There is a not inconsiderable group of cases in which uterine hemorrhage may be present even though the most careful examination of the pelvic organs, either before or at operation, shows no gross abnormality. In these, as will be discussed below, the bleeding is presumably of purely functional origin.

A discussion of all the causes of uterine hemorrhage would of course be impossible



within the limits of a single short paper. It has seemed to me wiser to touch briefly upon a few of the causes which are especially important or which illustrate the general principles we have been discussing.

*Conditions Associated with Pregnancy.* With the obstetric forms of hemorrhage we are not here concerned, but a very large group of cases is encountered as a sequel of pregnancy or as an accompaniment of certain abnormal forms of gestation. If any large group of cases of abnormal bleeding be analyzed, the cause which would almost surely be found most frequently is incomplete abortion. Spontaneous miscarriage is frequent enough, but the great frequency of induced abortion now-a-days adds vastly to the number of cases of postabortive hemorrhage encountered by the practitioner. Speaking generally, the persistence of the bleeding is indicative of a retention of embryonic tissue. The passive retention in itself may be associated with much less bleeding than is seen when the uterus attempts to expel the contents. At this time large blood spaces may be opened up and bleeding may be profuse, whereas previously there had been little or perhaps none. I have seen a large placental cotyledon retained for many weeks after delivery without much bleeding, pain, or discharge, but with the occurrence of severe hemorrhage when finally the uterus attempted to expel it.

The presence of placental tissue is not of course per se an indication for its operative removal. Indeed, gynecologists are coming more and more to the practice of noninterference in such cases. In certain cases I feel that gentle evacuation is still the better plan; as where noninterference may mean persistence of bleeding for many days or weeks. The long disability which is thus entailed is enough in itself to justify the procedure in certain such cases of the nonseptic type. There are of course many other aspects of this broad question which can not be here discussed, but it may be repeated that curettage in such cases is usually unnecessary and often harmful.

Tubal pregnancy, formerly looked upon as a rarity, we now know to be extremely common. The practitioner who is alert to its possibility will least frequently fail to diagnose it.

Bleeding is present in most cases, but not in all. It may or may not follow a period of amenorrhea. Often there is an actual anticipation of the menstrual date, rather than a delay. Usually the bleeding is of the scanty, "spotting" type, but it may be fairly free. It is initiated by the death of the embryo, as I have elsewhere discussed. When amenorrhea is present in a case of tubal pregnancy, therefore, it may be assumed that the embryo is still living. Bleeding of the type above described, together with the presence of a tender unilateral mass, should always make one suspect the existence of a tubal pregnancy. One should not attach too much importance to absence of the signs of free abdominal hemorrhage, for this is present in only a small proportion of cases, the so-called tragic or cataclysmic type.

Two forms of abnormal pregnancy, hydatidiform mole and chorio-epithelioma are commonly associated with bleeding, but as they are relatively infrequent, I shall not stop to discuss them here.

*Neoplasm.* By far the most important cause of uterine bleeding is cancer, because of its dire possibilities to the patient. Much the most frequent type is squamous cell carcinoma of the cervix, and in this slight bleeding is likely to be an early symptom. It often occurs after defecation, coitus, or severe exertion. There are a few cases in which bleeding, or, for that matter, any other symptom, may not appear until the disease is rather far advanced. Such patients are not given a chance at early recognition, however much they may have been touched by the anticancer campaign. The importance of immediately giving heed to bleeding when it does occur, however, can not be too strongly emphasized.

The recognition of adenocarcinoma of the body of the uterus is somewhat more difficult, because it is beyond the reach of simple inspection and palpation. It usually occurs in women who have passed the menopause. Bleeding at this time should mean a diagnostic curettage, with competent microscopic examination of the tissue. The diagnosis rarely presents any difficulty. Other well-known neoplastic causes of bleeding are myomas, polypi and adnexal tumors.

*Inflammations.* The same may be said of inflammatory disease of the pelvic organs, particularly the common forms of adnexitis; the bleeding so often associated with this has already been discussed as presenting a combination of structural and functional etiology.

*Functional Bleeding.* The form of bleeding which is most difficult of explanation is that which is seen in patients who present no demonstrable gross abnormality of the pelvic organs. This is a relatively large group of cases, which has been much discussed in the literature under such designations as functional, idiopathic, essential, or intrinsic. Furthermore, it is quite certain that many cases of bleeding which have been explained on the basis of myopathic change and arteriosclerosis really belong to this group of genuinely functional cases. Most frequently, bleeding, of this variety occurs at or near the menopausal age; it is not infrequent in young girls at or shortly after inauguration of the menstrual function, and may be observed at any age during menstrual life, though in a general way it is limited to the later period. Such bleeding most often takes the form of excessive and prolonged menstruation, but more or less continuous uterine bleeding is not unusual. It is not characteristically associated with pain. When such bleeding is encountered in women during the cancer epoch, as it so often is, its importance becomes great because of the obvious necessity of distinguishing it from the bleeding of cancer. This differentiation is usually comparatively easy. The common cervical form of cancer, i.e., squamous cell carcinoma, can ordinarily be readily diagnosed by inspection and palpation, aided by microscopic examination of a clipping if necessary. The internal forms of cancer, more particularly adenocarcinoma of the body, can not be diagnosed without diagnostic curettage and careful microscopic examination. Often in these doubtful cases, one will be gratified to find that there is no sign of cancer, but that the uterine mucosa shows a very characteristic picture which we have come to associate with functional bleeding; this is the condition, first described by Cullen, and designated as hyperplasia of the endometrium, and as it has been fully discussed in previous papers, I shall not here re-

view its pathology. It is so distinctive that it can often be recognized at a glance through the microscope. The fact that it occurs only during the era of ovarian functional activity, that it, like the bleeding, often recurs after curetting, that both the bleeding and the hyperplasia disappear after removal of the ovaries or after radiotherapy—these and other considerations leave little doubt that the bleeding and the associated endometrial change are not related as cause and effect, but that both are due to the same underlying cause, a disturbance of ovarian function. Incidentally, it may be added that the ovaries of such cases show as rather characteristic changes an absence of corpora lutea and the presence of a large number of ripening follicles.

A final word may be said as to the management of such cases. This will be done in only a summarizing fashion, as the question has been more fully considered elsewhere. Mild types, especially those seen in young girls, may tend to spontaneous correction. When severe enough to cause concern, a curetting is indicated to establish the diagnosis, which is easy when hyperplasia of the endometrium is found, as it is in the largest number of cases. Occasionally, it may be lacking, though in such cases one must be doubly sure that no obscure anatomic cause for the bleeding, such as a small fibroid or a polyp, is being overlooked. The curetting usually relieves the bleeding, in some cases permanently, but in a large proportion, probably at least one-half, only for a time. If bleeding recurs, or even before this, organotherapy is a rational though usually not brilliantly successful measure. Corpus luteum therapy is theoretically indicated. The preparation should be one containing the lipoids, and should be suited for intramuscular injection. The results with the commercial extracts now available, have been very disappointing, but it is probable that the time will come when really potent preparations will give far more striking results.

Thyroid therapy, especially in cases showing definite evidence of hypothyroidism, is at times of value, and so is the hypodermic employment of posterior pituitary extracts. Indeed, I have gotten better results with the daily injections of pituitary extract than with any



other form of organotherapy. The problem now is one which concerns the biochemist and the manufacturer, for the failure of organotherapy is probably due chiefly to lack of potent extracts, rather than to faulty reasoning as to their indications.

In women at or near the menopausal age, and where preservation of the reproductive function need not be considered, the problem is an easy one, once the diagnosis has been made. Here, radiotherapy finds one of its most valuable indications, for the bleeding can be checked with almost absolute certainty. Radiotherapy in young patients is not to be so lightly advised, as there are still certain considerations which make it undesirable except as a last resort. Given competently and in properly small dosage, the risk of unfortunate sequels, such as permanent sterility, is probably not very great. The alternate plan, aside from the organotherapy already spoken of, is a repetition of the curettage, perhaps several times, at such intervals as recurrence of the bleeding may necessitate. Each case must be judged on its own merits, with a full consideration not only of the medical problem involved, but also of the social and economic factors presented.

Hysterectomy is now rarely necessary for functional hemorrhage per se, although at times, especially when other indications are present for laparotomy, it is a perfectly proper procedure in the case of women at or near the menopause.

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## REFERRED PAINS OF RECTAL ORIGIN.

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In the general practice of medicine physicians not infrequently encounter certain chronic ailments which are notoriously intractable to treatment and which appear obscure in their etiology. I refer to cases of sciatica, backache, coccygodynia and a large group of so-called "rheumatic back and leg pains". Now,

if we are at all of the opinion that it is advisable to understand the factors at work in a condition of disease before attempting treatment, then such cases of backache, sciatica and allied vague "rheumatic" condition, most certainly merit serious contemplation.

The current explanation of these conditions is that they are due to sacro-iliac arthritis, to "muscular rheumatism" or, perhaps, that they are due to neuritis. There is little doubt but what sacro-iliac disease and sciatic neuritis can cause just such pain, yet the fact remains that these conditions are often conspicuously absent. Then, too, of late years there has been a tendency to ascribe this group of ailments to "focal infection". While the latter is always to be considered as a possibility, it must yet be conceded that it is often the refuge of an ignorant or thought-weary mind. When we can establish an explanation on the basis of definite neural pathways, the focal infection explanations seem superfluous, if not fanciful. The medical profession is, of course, well aware of the fact that pain may be referred to the lumbar or sacral regions, or leg, without the existence of disease in these areas. Now if, for instance, we can discover a definite pathologic condition so situated as to be anatomically capable of causing, by the phenomenon of misreferred sensation, the symptom of which the patient complains, why not accept this explanation, commonplace as it may seem, as a working basis for treatment? Such a procedure is, at least, founded on demonstrable psychologic facts. Our "focal infection" explanation, all too often is not.

For example, let us take the instance of the coincidence of rectal disease and lumbago, sacral backache, sciatica or rheumatic leg and heel pains. There are no doubt sufficient case histories illustrative of this coincidence in your own records to obviate the need of quoting others. We have all, no doubt, seen cases in which these clinical conditions appear to have had a spontaneous cure when the rectal condition had been subjected to treatment. Indeed there is to be observed a similar parallel between the intensity of referred symptoms and the degree of pathologic state in the rectum. I have frequently had patients tell me that the only time they had backache was when their

hemorrhoids were down. Then again, I have had patients suffering with fissure in ano describe definite leg pains during defecation, followed by aching and a sense of weakness in the leg corresponding with the local soreness aroused in the fissured area by this act. Instances of this kind might be multiplied, but these observations serve to raise the question as to whether the phenomena observed are mere coincidences.

Modern physiology furnishes us with a lucid explanation of the neural physiology involved. When rectal disease is present, abnormal afferent impulses travel via the sympathetic plexuses to come into synaptic relation with the posterior spinal ganglion or posterior horn cells of the first 4 sacral segments. These segments supply certain skin areas diagrammatically indicated. The abnormal stimuli travel from the sacral cord to the cerebral cortex and there arouse the sensation of pain. The mind, in seeking to refer this pain, misrefers the sensation to the skin areas supplied by these segments since they are the usual source of painful stimuli. Thus arises that group of vague "rheumatic" pains erroneously known as lumbago, coccygodynia or sciatica, depending upon the particular area of misreference. Obviously, treatment attempting permanent relief of these conditions must be directed toward the primary cause, namely, rectal disease.

There is perhaps nothing new in what I have said on this subject but in this case it is resurrected to the extent of almost being new; it appears to be so thoroughly lost sight of that a restatement is, from a logical standpoint, acceptable. Obviously, if the rectum and sigmoid are never examined in these cases, the relation of rectal disease to misreferred pains of this type will never be properly appreciated; but when the matter of a rectal examination is neglected, one must not feel unduly offended if a proctologist successfully treats your best case of sciatica by removing a chronic anal ulcer.

The conclusion to which we hasten, after contemplation of this type of case, is that a thorough rectosigmoidoscopic examination is an essential preliminary to treatment of these patients.

## THE TREATMENT OF CERTAIN CARDIAC EMERGENCIES.

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(Read before the Morris County Medical Society, Morristown, N. J.)

It may be interesting to review the treatment of certain emergencies which have a common cause in cardiac disease. Some of these conditions are very serious, others are merely startling or alarming to the patient, but any one of them may serve to call the doctor out at uncomfortable hours of day or night and so may be properly spoken of as an emergency.

One of the most alarming emergencies that a physician is called upon to meet is an attack of acute edema of the lungs. The patient is sitting up in bed, weak and exhausted, restless, gasping for air, looking as though each breath were going to be his last. He usually raises pinkish frothy sputum and examination will reveal that the lungs are full of the numerous fine râles and rhonchi that are typical of pulmonary edema. You may wonder perhaps that I have mentioned pulmonary edema as cardiac emergency but you will realize on second thought, I am sure, that it is always due to cardiac failure and so belongs quite rightly in this discussion.

Edema of the lungs may come on quite acutely or it may develop rather gradually during the course of a few hours in a patient who has some other sickness. The paroxysmal form occurs in the course of chronic hypertension and in these patients the blood pressure will be found well above 200 mm. It may occur in the course of arteriosclerosis of the coronary arteries, sometimes it seems likely that it is not due to thrombosis but to a temporary functional failure of the heart. In these coronary cases the blood pressure is low, 100 mm. or less, or if it has been previously elevated, is lower than its accustomed level and probably not above 150 or 160 mm. Examination of the heart in such a case may reveal no abnormality, except a faintness of the heart sounds. Neither enlargement nor murmurs



need be present, though occasionally either or both will be found.

Edema of the lungs may occur in the course of pneumonia, but here we must make a sharp distinction between edema with its many fine crackling râles and the condition found when there is much unexpelled mucus in the bronchial tubes and many coarse and fine rhonchi or sonorous râles are heard.

Edema of the lungs may sometimes be the result of a period of cardiac overstrain in a patient who already has valvular disease or chronic myocardial changes. During labor, a woman with heart disease will occasionally develop an acute form of edema of the lungs. Sometimes a person with myocardial changes will bring on edema of the lungs by some unusual effort, perhaps lifting a heavy weight, perhaps an unaccustomed more prolonged exertion. Not infrequently the effort of walking up a long hill or against a strong wind will be the cause of an attack. The attack will sometimes be the first sign of myocardial defect though the patient will usually on careful questioning admit to having had some unusual dyspnea or precordial discomfort on exertion for a time previous to the attack.

The treatment of edema of the lungs, whatever its cause, demands rest in a comfortable position—an easy chair is usually better than bed—and a hypodermic of  $\frac{1}{4}$  gr. of morphin sulphate and  $\frac{1}{50}$  gr. of atropin sulphate. For further treatment, we must now consider both the etiology and the condition of the patient. If the blood pressure is very high—above 200—hypodermic of  $\frac{1}{50}$  gr. of nitroglycerin may work a magic change, reducing the blood pressure and relieving the strain upon the heart. In patients without the hypertension etiology, nitroglycerin does no good.

If the veins in the patient's neck are found to be distended with blood, even when he is sitting erect in a chair, it indicates that there is a considerable degree of back pressure failure and overdistention of the heart with blood. The veins are connected directly to the right auricle and so the pressure in them may be taken as an indication of right auricular pressure. When the heart fails in its function of pumping the blood this accumulates in the veins and causes them to be over distended. Thus, we may mea-

sure the degree of cardiac failure by the height to which the veins must be raised before they empty. If we observe the veins at the bend of the elbow and gradually raise the arm from its natural position out to the side and upward, we will find that at a certain level the veins seems to be no longer distended. This level measures the degree of back pressure in the right heart. Normally, the veins at the bend of the elbow will collapse when raised to the level of the second rib, anything further than this indicates an abnormal pressure within the vein; if we must raise the vein above the level of the clavicle it indicates a rise of venous pressure which is so great as to be harmful to the cardiac function. Phlebotomy is the best means to relieve this and blood should be drawn until the veins of the neck are no longer distended. It may take only 2 or 3 oz. to do this or, perhaps, as much as 5 to 10 oz. There is nothing to be gained by taking more than an amount that will relieve the congestion but we must take at least enough to do this.

If there is much cyanosis and if the above measures do not promptly relieve it, oxygen inhalation should be used. This is always advisable with pneumonia patients. The theoretic ideal for oxygen inhalation is a mask which may be placed over the face, or a mouth piece to insert in the mouth similar to that which is used in the army gas mask. These things are often not well tolerated by patients who are very short of breath so that it is often necessary to have some other means of administering oxygen. The old familiar funnel on the end of a rubber tube has been frequently shown to have very little avail in raising the oxygen concentration of the patient's inhaled air. Each expiration blows the funnel empty of oxygen so that the inspiration is practically from room air. The most satisfactory method for an emergency is to direct the stream of oxygen from the rubber tube into the patient's nose or mouth, whichever he is using for breathing. For more prolonged use, a bed tent consisting of half barrel hoops covered with a transparent rubberized silk should be placed over the patient's head and shoulders and the oxygen delivered beneath this. If it is allowed to run in at the rate of

about 1 or 2 liters per minute it will produce a satisfactory concentration of oxygen beneath the improvised tent. Specially purified medical oxygen is not necessary for this purpose; ordinary commercial oxygen is much cheaper and quite as satisfactory.

Digitalis is indicated if the patient has valvular disease or myocardial disease but in the purely hypertension cases I see no reason for it; there the heart is normal, and if relieved of the strain of hypertension will recover promptly enough of itself. Digitalis will be given differently depending upon whether the patient has received digitalis or any of its allies at any time within the previous 2 weeks. A patient with edema of the lungs who has not had any digitalis within 2 weeks may be given a large intravenous dose. It has been found recently that the generally administered doses of the intravenous digitalis preparations are much too small; 1 or 2 ampules—15 to 30 minims—of digitan solution or digifolin or digalen is so small a dose as to be practically useless. In working with digitalis two things have been found to give an early indication of digitalis effect. These are a slowing of the ventricles when auricular fibrillation is present, and a diminution in the heights of the T wave of the electrocardiogram. Both of these changes take place with an amount of digitalis much less than needed to produce the therapeutic effect. It has been found that 1 or 2 ampules of these drugs is less than the amount which will affect the T wave of the electrocardiogram or slow the heart rate with auricular fibrillation; to produce the slightest appreciable effect at least 3 ampules are necessary; to produce a prompt and marked effect we need an amount equal to 1 minim of the solution per pound of the patient's weight—8 ampules for a patient of 120 lb. and 10 ampules for a patient of 150 lb.—and it should be given slowly over a period of 2 or 3 minutes so that it may be well mixed with the patient's blood and not arrive in the heart all at one time. This may seem an impossible dose to you but I have demonstrated, to my own satisfaction at least that these preparations are no stronger than good tincture of digitalis and that they do not produce any demonstrable effects in doses of less than 3 or 4 ampules, 25

or 30 minims per pound of body weight of the patient. If tincture of digitalis is given by mouth in the same dose—I minim per pound of body weight—the first demonstrable effects will appear in from 2 to 4 hours and the maximum effect of the dose will not be reached until from 6 to 10 hours after administration. This is much too late to be useful for an emergency. The intravenous administration of this dose of the digitalis preparations does not produce instant effects but does something by 15 minutes, with the maximum effect between 1 and 2 hours after administration.

For patients who have been receiving digitalis within the past 2 weeks it is very difficult to decide upon the intravenous dose. We must err on the side of giving too little rather than too much and 30 or 45 minim doses are proper to be repeated after 2 hours if it seems necessary.

I cannot leave the subject of intravenous digitalis without mention of ouabain, the gamma strophanthin. This drug is said to act very quickly and should be given in a half milligram dose to a patient who has not had any digitalis previously. It should not be given at all to one who has already been taking digitalis, for the therapeutic and toxic doses are so close that dangerous poisoning may result. We know that definite effects are produced within half an hour after administration but, though it is generally credited to act quicker than digitalis experimental proof of this has not been published.

A word about the use of adrenalin in these cases. It is often given by physicians for these attacks because of the patient's weak pulse and low blood pressure. It seems to me to be absolutely contraindicated. The best way to strengthen the pulse and raise the blood pressure should be to help the heart to pump out the blood coming to it, and yet many physicians have told me of recoveries following the use of adrenalin and attributed by them to its use.

Another cardiac emergency that the physician meets occasionally is due to thrombosis of a branch of the coronary arteries with infarction of an area of the heart muscle. If the patient does not die almost instantly of this, the picture will be one of profound shock



with almost imperceptible pulse, pale ashy grey skin and profuse perspiration. There may be vomiting or nausea or much eructation of gas. There may be no dyspnea or, if many râles develop in the lungs, dyspnea may be slight or moderate. The only sensation may be an oppression in the lower anterior chest, or there may be precordial pain of any degree up to the most severe pain with wide radiation,—typical angina pectoris. For these attacks morphin and atropin should be given by hypodermic in the doses mentioned, and the morphin repeated in 15 or 20 minutes if the first dose does not quiet the patient and give relief from the discomfort. These patients are best off in bed. They do not usually have the orthopnea that accompanies pulmonary edema. Adrenalin is bad here, too, I believe, though it is sometimes given because of the weak pulse. This weak pulse is in part a life saving measure. To raise the arterial pressure too much might stop the circulation, for the damaged heart cannot eject the blood against much resistance. Nitroglycerin is not indicated, for the blood pressure is already so low that further reduction would be harmful. Absolute rest is all we can do to tide over this emergency until the heart itself can recover its strength. Relatively slight exertions, such as getting in or out of bed, can easily overstrain the weakened heart and the patient should not be moved from one place to another for at least several hours after the attack. There is great danger of sudden death at this time.

Another type of cardiac emergency not usually so serious as those just discussed is the severe attack of precordial pain. The pain may be due to coronary narrowing, to aortitis, or to the occurrence of many premature beats in a person with a neurasthenic hypersensitivity. Sometimes tobacco will cause precordial pain by producing arrhythmia and coincidentally raising the threshold of sensibility. Pains of many sorts and varied grades of intensity are produced by these things. Though the pain is sometimes only slight, yet at other times or in other patients there may be a pain that is so severe and radiates so widely, a typical angina pectoris, that the patient feels he is in imminent danger. The situation of the pain helps us somewhat with the diagnosis but we

must carefully distinguish between the site of the pain itself and the distribution of its radiation. With any of these cases the radiation may be much the same, across the chest, about the apex beat, to the left shoulder, the left arm, the left side of the neck, or perhaps to corresponding places on the right side, or to both sides. This radiation is unimportant, but the seat of the pain itself, if retrosternal and below the level of the third rib is indicative of a coronary etiology; if retrosternal and above the third rib, of aortitis; and, about the region of the apex beat indicates that the cause is less likely to be organic disease of the heart than an abnormal sensibility with or without the complication of arrhythmia or tobacco.

Treatment for the patients with coronary disease or aortitis consists of rest and nitroglycerin given as a tablet to be dissolved in the mouth. For severe attacks the dose should be 1/100, though 1/200 gr. is usually enough. Amyl nitrate by inhalation may serve better in some cases but the severe headache that may follow makes it unsatisfactory if it must be given often. Morphin is not necessary for the pain and has no beneficial effect unless the patient is very restless and cannot be quieted by other means. The treatment of the causal condition is important with these patients so that a recurrence of the attack may be prevented. To avoid overexertion and the eating of large meals, to regulate the bowels so that stasis does not occur, to take diuretin if the cause is coronary disease, and to have thorough anti-luetic treatment if there is luetic aortitis, are the chief lines to be followed.

When the pain is due to a combination of neurotic hypersensitivity with arrhythmia or some form of heart disease, the best treatment for the attack is aromatic spirits of ammonia or a fair sized dose of bromide, say 30 gr. To prevent recurrence with these patients demands the greatest care. They must be relieved of nervous strain, must have sufficient rest and careful regulation of the bowels. Taking some mild sedative continuously for a while and receiving definite reassurance of the harmlessness of the attack will each do its part toward effecting a cure. They are difficult cases though we cannot expect them to recover promptly.

Paroxysmal attacks of rapid heart action are very distressing to the patient, and so constitute another form of emergency. The heart feels as if it were fluttering, or spinning like a top, or racing and the abrupt onset and cessation of the attacks is easily appreciated by the patient. We must distinguish between these attacks and simple tachycardia which does not start or stop abruptly and which is due to a different sort of cardiac mechanism. Paroxysms of tachycardia are due to overirritability of a focus in the heart muscle so that it initiates a rapid series of beats. The focus may be in the auricles, ventricles or auriculo-ventricular node but in each case the result is a rapid, regular heart beat. Auricular flutter may also occur in a paroxysmal form and result in a rapid regular heart beat which is practically impossible to tell from the sort of tachycardia just mentioned unless an electrocardiogram can be obtained. Auricular fibrillation may occur in a paroxysmal form and causes a very rapid heart rate which is *irregular*. By this sign it is easily distinguished from the other paroxysms of rapid heart action.

Attacks of paroxysmal tachycardia may sometimes be stopped abruptly by pressure upon the vagus nerve in the neck. It is somewhat of a trick to press upon the vagus as it lies deeply in the neck in the angle between the larynx and the vertebral muscles. It is firmly bound within the carotid sheath however, and this is the key to its location—behind and mesial to the carotid artery. It helps greatly to have the patient lying on his back, with the head in a position to relax the sternomastoid muscles and turned slightly away from the side upon which you are pressing. The thumb is better than the fingers for this purpose, using the left thumb for the right vagus and vice versa, pressing it in mesial to the carotid at the joint just below the hyoid bone where the artery is most superficial. When you are certain that your thumb is mesial to the artery so that it will not slip away when you press upon it, then press directly backward catching the artery between your thumb and the vertebral muscles; this presses upon the vagus nerve and the pressure does not need to be maintained for more than 1 or 2 seconds to produce an effect, if one can be produced.

A normally beating heart will always be slowed by this procedure if you actually succeed in pressing the vagus nerve. When paroxysmal tachycardia is present this is often stopped abruptly, the heart pausing for a second or two and then resuming, somewhat irregularly at first, and then with a normal rhythm. Sometimes the right vagus sometimes the left will be most effective, so it is best to press upon first one and then the other until the desired effect is obtained trying 3 or 4 times on each side. If neither is successful, then the induction of vomiting should be tried, using ipecac or apomorphin. If this does not succeed, morphin sulphate by hypodermic  $\frac{1}{3}$  to  $\frac{1}{2}$  gr. depending upon the weight of the patient should be used. I would caution, however, against using this directly after apomorphin because of the danger of respiratory depression by the summated effects of these two drugs.

Occasionally all of these methods will fail, and when they do we must fall back upon digitalis. Start with a single dose of the tincture equal to one minim per pound of body weight given by mouth in 3 or 4 oz. of water. If this does not slow the heart before 10 hours, give 30 minims of the tincture morning and night until the heart rhythm is affected or until vomiting appears. Whenever under this treatment a previously regular rhythm of about 150 per min. first becomes irregular and then becomes regular at exactly half of its former rate we are probably dealing with auricular flutter.

Paroxysmal rapid heart due to auricular fibrillation should be treated with digitalis as outlined above. If, however, the attack has only been in progress for an hour or so it is safe to use quinidin sulphate, giving 10 gr. at once, and repeating the dose after 4 hours if the first has not stopped the fibrillation. If fibrillation is still present 4 hours after the second dose then I would give digitalis as just-described. It is not well to continue quinidin with these patients as you would when treating a patient with a long standing fibrillation for I feel that it is better, if the first 2 doses fail, to promptly slow the heart rate with digitalis, and save the patient from the possibility of cardiac failure due to long continued rapid beating.



In closing, I think it important to stress 3 points: (1) Adrenalin must be used with caution in the presence of a weak pulse due to cardiac failure. (2) If digitalis is to be given for cardiac emergencies it must be given intravenously and in much larger doses than we are accustomed to use or we will not obtain the full benefit that digitalis is able to give until the time of the emergency is past. (3) I hope that you will not use these doses intravenously unless you are certain that your patient has not been taking digitalis within the 2 weeks preceding.

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## PROPOSED OPERATION FOR ABDUCTOR PARALYSIS OF THE HIP.

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PAUL C. COLONNA, M.D.,

Assistant Surgeon, Hospital for the Ruptured  
and Crippled, New York, N. Y.

Among the sequels of infantile paralysis which the orthopedic surgeon is called upon to treat, none leaves the patient with a more pronounced gait than that following paralysis of the abductor muscles of the hip. The severe lurch of the body toward the affected hip with each step produces a most awkward manner of walking. In an attempt to lessen this lurch toward the affected side several types of operation have been devised. Probably the one that has evoked most favorable comment has been that proposed by Legg, who changes the insertion of the tensor fascia lata muscle by placing it directly into the outer surface of the shaft of the femur. The aim of the surgeon should be to permit the patient to walk without that characteristic lurch, and this can be accomplished with a very few degrees of voluntary abduction. The operation devised by Legg would seem to prove that only a very small amount of voluntary abduction at the hip is necessary for walking, for it is incon-

ceivable that a small, comparatively weak muscle such as the tensor fascia lata could abduct to any real degree the whole lower extremity.

The operation proposed by the author has been developed on several cadavers and may be of value in cases with paralysis of the hip if the quadriceps femoris muscle is active. It is proposed to take advantage of a portion of the quadriceps femoris muscle by detaching the long head, the rectus femoris, from its two origins and freeing this portion from its bed for a few inches; this long head is then brought through the fascia lata and is placed superficial to the tensor fascia lata, after which it is inserted into the crest of the ilium or fascia covering the paralyzed gluteus medius muscle.

The technic of operation is as follows: An incision is made along the anterior half of the iliac crest and extending downward on the anterior aspect of the thigh for about 4 in., taking note of the lateral femoral cutaneous nerve lying on the fascia lata just below the anterior superior spine. Make an incision through the fascia lata along the posterior border of the sartorius about 4 in. in length and retract the sartorius outward near its origin, the fibers of the iliacus being retracted inward, thereby exposing the long head of the quadriceps femoris. By blunt dissection trace this rectus femoris tendon to its origin, removing with a chisel a small amount of bone with the head arising from the anterior inferior spine. This tendon is removed from its bed for the distance of about 3 in., when a branch of the femoral nerve is seen to enter the posteromedial surface of the rectus femoris muscle. Then pass this loosened muscle through the fascia lata and across the tensor fascia femoris muscle and with the lower limb abducted about 25° suture either the transplanted tendon into the fascia lata covering the paralyzed gluteus medius muscle or, by a zigzag tenotomy of the rectus tendon, so lengthen it as to allow it to be buried in a bony trough made in the crest of the ilium. Close the subcutaneous tissue and skin with plain catgut and apply a long bodied spica, with the limb in about 25° abduction.

## In Memoriam

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CLADEK, Walter E., 93 West Milton Avenue, Rahway, New Jersey, the oldest practicing physician of that city, died at his residence, February 5, after a brief illness of pneumonia.

Dr. Cladek had reached the age of 69 years and had conducted an extensive practice up to within a week of his death. Few physicians have attained to such prominence in Union County and Dr. Cladek's general popularity is well attested in the action taken by the Mayor of Rahway, who issued from the City Hall the following order: "Out of respect to the memory of Dr. Walter E. Cladek, I direct the city offices to close on Tuesday, February 9, at 12 o'clock noon and to remain closed for the remainder of the day, and I request the officials of the city of Rahway to make arrangements to attend the funeral in a body."

Dr. Cladek was a member of the Union County Medical Society, the Medical Society of New Jersey, the American Medical Association, the Clinical Society of the Elizabeth General Hospital, and President of the Medical Staff of the Rahway Hospital.

The deceased is survived by his widow, Anstis Van Campden Cladek, two daughters, Mrs. Douglas G. Stewart, of Wilmington, Delaware, and Mrs. Rollins W. Moore, of Fanwood, two brothers, George, of Newark and William, of Perth Amboy, and one sister, Sister Maria Digna, of St. Elizabeth Hospital, and two grandchildren.

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BURD, William J.—On the evening of Friday, March 12, 1926, Dr. William J. Burd, former President of the Warren County Medical Society and for 35 years an active practitioner of Belvidere, New Jersey, died of heart disease at the age of 60 years.

Dr. Burd was a graduate of Lafayette and of the Medical Department of the University of Pennsylvania. He was District Physician of the Pennsylvania Railroad and Vice-President of the Belvidere National Bank.



# JOURNAL OF THE MEDICAL SOCIETY OF NEW JERSEY

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## OUR ANNUAL MEETING.

Announcement was made some time ago that the next meeting of the State Society will be held at Haddon Hall, Atlantic City, June 17-18-19, 1926. As that is a very busy part of the season at this popular seaside resort, members should promptly apply for hotel reservations if they wish a choice of rooms and satisfactory accommodations. Even more important is the necessity for beginning now to make preparation for attending that convention. If one determines well in advance that he will attend any such meeting, on a fixed date, it becomes a fairly easy matter to so arrange engagements as to keep that date open and to make all other work fit into the original plan. If, on the other hand, one delays decision and waits until the actual time of meeting approaches, it becomes increasingly difficult to clear the way of encroaching demands upon this time. Determine now that you will join your confrères this year at the annual convention, mark those days *reserved* on your calendar and then let nothing interfere with such reservation.

There are very few emergency demands which can constitute a legitimate excuse for failing to be "among those present" at these annual gatherings. The busiest men in the profession are almost always able to find time to attend society meetings, whether these be held at a near or a distant point; only rarely does the "big surgeon", the "popular consultant", or the "successful specialist" miss one of these meetings. How ridiculous it is for that practitioner, general or special, who has far

too much less demand for his services, to claim that he has not time to spare for this purpose. To say that the "big fellow" can afford to take the time, and that the man who has not yet attained to the same state of financial success cannot afford to leave his office for several days, is a most fallacious argument. It would be well for the latter individual to consider how the former reached his enviable position. One of the greatest factors in success is the goodwill and the confidence of one's professional associates; and this applies as well to the remote country practitioner as to the city specialist. The flow of confidence and trust and of professional favors is not entirely in one direction; the successful specialists have many opportunities for speaking a helpful word in behalf of the general family physician and, particularly, for extending aid to the young man who has not yet "arrived".

We should look upon the time and money spent upon attending these meetings as being in every sense an investment.

Come, let us fraternize in June; let's get better acquainted personally and let us in consequence, profit socially, professionally, and ultimately financially, by closer communion one with another.

## ADJOURNMENT OF THE STATE ASSEMBLY.

In the last issue of the Journal we discussed some of the legislation pending before the General Assembly and expressed the hope that much of it would not be enacted into law. The

annual legislative conclave ended, in so far as it might affect medical matters, on March 25, and without having passed any of the proposed laws of medical import. While this means that some desirable legislation was defeated, we may feel reasonably well satisfied with the result because it included the death of several pernicious bills.

The "Doctor's Title" Bill remained buried in the Judiciary Committee of the House, where it was referred on presentation, along with several chiropractic bills and the proposed act requiring physicians to write all prescriptions in triplicate and endorse thereon the disease condition for which the prescription was given.

The smallpox and rabies vaccination bills failed of passage despite favorable reports presented by the public health committees of the Senate and House respectively. Both bills offered by the Board of Medical Examiners, designed to effect revocation of licenses of midwives or physicians convicted of criminal abortion, reached the third reading file of the House, but only in the last hour of the session and too late for any action by the Senate. The sterilization and the birth control bills failed to muster sufficient support to secure a vote.

The most interesting contests on medical matters developed in association with the naturopathic, osteopathic and chiropody bills. The proposition to license "naturopaths" and to appoint one of their number on the Board of Examiners met with decisive defeat in the House. The osteopathic act was manouvered through the House by a bare majority vote—securing, through the deft manipulation of its spokesman, 31 affirmative votes—but it died in the public health committee of the Senate. One of the chiropody bills, defining the term and the conditions for examination, passed the House, was reported out of committee in the Senate during the afternoon of the last day, and failed to reach the calendar for final action only through being crowded out by more important business. The last hours of the session were thus rendered somewhat anxious and exciting for those who were defending present medical standards.

Since we could not secure passage of desired legislation this year, we are grateful for that

degree of success that at least prevented adoption of undesirable and even vicious propositions.

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### THE PHYSICIANS' SHARE IN DETECTING BROTHELS.

Recently the life of one of our state troopers was sacrificed while obtaining evidence against a disreputable road-side brothel—one of a number of foci for the spread of venereal infections. As a result of this dastardly crime there has arisen a demand for the closing of such dives throughout the state, a demand voiced by the Governor who has declared that every law-defying road house must go. It is to be regretted that concerted action against these places had to be purchased at so high a price.

The existence of numerous houses of prostitution has been made known to the State Department of Health by means of venereal disease case reports which included the reputed source of infection as divulged by the patient. For the past 3 years, the state health authorities have brought pressure to bear upon the police officials to close brothels known to be harboring venereally infected prostitutes; as a result many have been closed, the keepers imprisoned, and the prostitutes sent to reformatory institutions for medical treatment and rehabilitation. It was in the investigation of one of these brothels named by a venereal patient and reported by a New Jersey physician that the trooper met his death.

The busy practitioner often considers case reporting a great nuisance and sometimes wonders if any use is made of reports; especially is this true of venereal case reports. It is reassuring to know that reports of gonorrhea and syphilis do serve so useful a purpose. Physicians have done the state an inestimable service in making these returns year after year, but at no time has there been greater need than at present for vigilance in learning of, and reporting, sources of venereal infection. When every agency is devoted to the single purpose of preventing commercial prostitution, New Jersey physicians will not neglect to do their share in gathering information so vital to the cause.



## Medical Economics

### ON CONSULTATIONS AND SPECIALISTS.

Apart from single handed and purely individualistic effort, coöperation is the keynote of human as well as of mechanical accomplishment. At factory or foot-ball the parts must coördinate and harmonize.

In hospitals, medical societies and other professional organizations, this factor is recognized. But in the more loosely knit relationships of professional life it is often well nigh lost to sight and mind.

This is particularly true of the dealings between doctors when a consultant, for one reason or another, is called in to see a sufferer. Too frequently the man in charge of a case is slow to recognize his approach to deep water; or he does not properly sense the growing uneasiness of a solicitous family, or give it the due consideration to which it is fairly entitled. Thus a consultation is suggested by the friends, and the practitioner suffers the disadvantage of losing the initiative, and at times of losing the privilege, properly his, of choice of a consultant whom he knows. He, of course, should be the one not only to have originally suggested the conference, but to select a man whom he knows to be best suited to the type of illness in question, and best adapted to meet that particular family, as well as one with whom he feels he can coöperate. In such case he still retains a steady control of the tiller.

To allow himself to be deprived of this advantage at the outset shows lack of foresight, and men of a certain rather narrow outlook, finding themselves in such a situation, grow resentful—and, foolishly enough, not at themselves, but at the family, patient, or even the consultant. Thus the first step in this effort at combining intelligence for the relief of ill health is one of dysharmony, and the final climax is complete discord. Little of the good that might have been effected has eventuated.

A consultation should be of use not alone to the patient, but to both doctors parties to it. Every such meeting should teach something to those concerned; lack of a proper rapprochement spoils it all, and time, money and effort are wasted in an utterly senseless manner.

A common failing of the city consultant in his contacts with the general practitioner is a complete ignorance of the problems of the latter's life, and often a very sketchy knowledge of general medicine. Called for a consultation by the practitioner, he brings, as he should, a highly developed special knowledge of a lim-

ited field of medicine. Such particularized knowledge is needed, and can only be attained by a man who devotes his whole time to one chosen line of work.

The practitioner of any specialty in medicine would almost invariably be a better specialist had he served a few years apprenticeship at general practice. Too often he has associated himself with his specialty at once on completing his hospital internship, and therefore, while an adept in his own field, he is apt, with his narrow experience, to fail sadly in grasping some of the broader problems of the cases upon which he is called in to give advice.

The general practitioner, whose field covers more or less the entire scope of medical work, is in no branch so profound or erudite as his confrère the specialist. One of his important functions in treating disease is to know his own limitations, and to recognize as early as possible when and where he needs help; then to secure it. His intellectual capacity, indeed his intellectual achievement, is often as great as, if not actually greater than that of the man whom he summons for counsel. His importance to the patient should be greater without question. Nevertheless, too frequently the specialist approaches him with the air of a deity descending from Olympic heights to converse with a mere mortal. The learned one assumes a condescending tolerance for the ignorance of the other, and castigates him, if not openly and on the spot, at any rate to his own cronies on his return to town.

Had our specialist had some experience of his own in general practice, were he familiar with "the cross country race at three a. m., neck and neck with the stork", he would bring to his consultation work a nicer idea of the relationship of his particular problems to those of general medicine; he would have a keener appreciation of the good qualities of the man whom he meets; he would be a more sympathetic teacher, and might even be a learner as well; there would in fine be fewer of the contretemps described above, and good team work would become more nearly universal.

There is an even greater lack of team work, and one more frequently encountered, where the patient goes to town and consults the specialist in his office. He may have gone at the request of his family physician, with letter of introduction and an account of his ills; or as frequently occurs, on the recommendation of some friend. In the first instance it is a common complaint on the part of the family doctor that the report he receives following his patient's visit is not only tardily sent, but is distinctly of poor quality. He wants some discussion of the case and its various possibili-

ties; he receives a pedagogic statement that the diagnosis is thus and so. He wants some idea as to the varied lines of treatment which might be pursued; he receives a categorical order to do this and that. He wants information on which he may exercise his own judgment as between man and man; he receives the pronouncement of a master to a school boy. The whole matter is treated in a dozen lines.

Where the patient has gone on his own initiative, no effort is ordinarily made by the specialist to get in touch with the family physician, who sooner or later learns about the visit, and it has profited him nothing of knowledge; nor does the patient derive the benefit he might, and should, had his own doctor known all about matters from the beginning. Often, of course, this situation is primarily the fault of the patient, who fears, groundlessly, to hurt his own doctor's feelings; but it is quite as often due to lack of interest on the part of the consultant, and a willingness to avoid unnecessary letter writing.

The proportion of specialists to the total number of practicing physicians has grown rapidly in the last quarter century, and the profession has not yet adjusted itself to the changing conditions. While many men have not the failings recited above, there is far too little coöperation and team play between the various units of this great network, and the situation does not do the profession credit.

The physician, party to a consultation, whether he is party of the first part or of the second, should ever keep three questions before himself:

How are we to help the patient?

What can I learn from this case?

What can I help the other fellow to learn?

## Esthetics

One of the greatest joys of aimless wandering about in strange cities lies in the unexpected discoveries occasionally made on such expeditions. We have all thrilled at the accounts of adventure befalling such care-free wanderers as Harun el Raschid, and some of us cherish recollections of personal adventures and experiences of equal interest to those so fascinatingly told of in the Arabian Nights stories. Indeed, each of us might, in turn, "a tale unfold" if we cared to contribute to another serial of a thousand and one nights. It is not intended at the moment, however, to present a story of that sort; there is nothing terribly exciting about the simple tale now to be given, a story that deals only with the surprise of

finding in a foreign city an artistic tribute to an American physician.

With nothing better to do one summer afternoon than to prowl around Paris in the vicinity of the American Embassy, we chanced upon a lovely, secluded small parked area bearing the euphonious name of "Place des Etats Unis"; in other words, a small square of shade trees and shrubbery named in honor of these glorious United States. We had seen it before but had somehow forgotten its existence, and, anyway had never before explored it properly. On this particular day the sun was hot and we were inclined to take refuge for a moment in the inviting coolness of the park. At the very entrance, attention was directed to a war



monument which appeared to be new and which, upon closer inspection, proved to be both new and interesting—a masterpiece by the famous sculptor, Jean Boucher, executed for the French nation and dedicated to those American volunteers who died for France, the Escadrille Lafayette of the Foreign Legion. Before a beautifully carved winged victory, a French poulu welcomes the arrival of an American Doughboy, and surmounted upon this pedestal is the life size figure of a victorious aviator. On the reverse of the pedestal, carved in stone, appear the beautiful lines of Allen Seegar:

"Yet sought they neither recompense nor praise, nor to be mentioned in another breath than their blue-coated comrades whose great



days it was their pride to share—Aye, share even to the death”.

To every American this tribute must bring a thrill of pride, but to the American who had the privilege of serving with the American Expeditionary Forces, there is also the heart-stirring emotion of personal participation in that demonstration of the brotherhood of man.

But, even a greater pleasure awaits the physician who chances to visit this little park. Delving deeper into its shades in the search for a place to rest, we noticed another monument, a rough hewn stone capped by a bust of a man, and while in charming seclusion, not hidden, rather protected, by the trees that surrounded it. Judge of our surprise at finding

March 30, a monument to the memory of Dr. Crawford W. Long, whom this nation is now recognizing in durable marble as the discoverer of anesthesia. In announcing the exercises to be held, and explaining something of the history of the dispute as to who first employed ether in surgical operations, the New York Tribune of March 21, 1926, concludes an article with the following paragraph relating to the dramatic endings of the careers of those who were involved in the controversy.

“It is curious that every rival of Dr. Long for this honor came to a dramatic end. Wells, overcome by the rejection of his claim by the French Academy, committed suicide; Morton died from congestion of the brain, induced by excitement over an article seeking to deprive him of his honors, and Jackson, like Wells, became insane from the contention over the disputed honors and died in an asylum. Dr. Long himself, ‘in the fullness of service’, was stricken with apoplexy at the bedside of a patient.”

## Medical Ethics

### ETHICS AND THE MEDICAL PROFESSION.

Richard C. Cabot, M.D., Boston, Mass.

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I know no medical school (or indeed any law school or school of business) in which professional ethics is now systematically taught. Occasional and sporadic talks may give the students some hint of the subject and of course the ethics actually followed by the teachers in their habits of thought and speech, in their dealings with students, patients, colleagues and “the laity”, may be absorbed by their students. Indeed, if the individual student has a chance to see his teacher “in action” outside the classroom, he may learn good ethics in one of the most effective ways—by example.

When I try to think of the most undeniable examples of an improvement in personal character and in ethical standards brought about within a few months by influences which one can put one’s finger on, I can recall none so striking as the rapid moral advance of the internes at the Massachusetts General Hospital during a period of years I was in position to observe them when their “chiefs” in the medical and surgical services were men of inspiring character, as well as of remarkable skill. One could count on it. Callow youths, shapeless souls, would be transformed within



it a testimonial to “Horace Wells, novateur de l’anesthésia chirurgicale”. The bust is a fine piece of work by Paul Bert, whose medallion portrait is carved on the pedestal. It was interesting to find this recognition of an American’s work, though it of course brought to mind the old controversy regarding the earliest use of anesthetics in surgery.

This happens to be an opportune moment to report this little adventure and to reproduce a photograph of these two monuments erected in honor of Americans, the first in recognition of war services, and the second in recognition of the victories of peace, because of an event scheduled to take place in Washington ere this appears in print. There is to be unveiled in Statuary Hall, at the National Capitol, on

the 18 months of their service, not into saints or heroes, but into something quite miraculously better than they were 18 months earlier.

Sometimes they copied the mannerisms as well as the ideals of their "chiefs" and assumed fashions of speech or of gait ludicrously foreign to their actual natures. But without an exception that I remember during the years to which I refer, these students gained astonishingly in integrity, in sincerity, in the aspiration for self-improvement conceived, of course, primarily in professional, not in moral terms but including, nevertheless, an infusion of genuine moral enthusiasm. These students have continued, as I have known them in later years, to meet their life opportunities with earnestness, with vim, without pretense or superciliousness, without meanness, with a good deal more honesty, generosity and liberality than their youth gave promise of.

To watch this change of character going on under one's eyes, year after year, in batch after batch of hospital internes, would convince anyone—as it convinced me—that it was not "accidental", that its causes could be identified with something in the leadership of the men under whose supervision these students met the great responsibilities and faced the great eye-openers of their internship. When anyone tries to convince me that character cannot be changed in any important respect by anything that we can do about it, that ethics cannot be taught, and that if men grow better, it is wholly through their own independent and internal metamorphosis, I find myself recalling the stubborn facts of my hospital experience, unable to doubt them. Many others have witnessed those same facts and borne the same testimony. The life of William Osler, and the waves of influence centering in his contacts with young men at Johns Hopkins and thence spreading circle beyond circle across America, is perhaps the most magnificent example of what I mean.

But Osler preached and wrote as well as practiced. The group of men who so signally transformed the lives of their internes at the Massachusetts General Hospital, during the years when I was able to watch the process, were men who never preached or wrote about ethics. They would have scorned such preaching or relegated it strictly to the clergy and the "uplifters". They were "practical men" first and last; yet they exerted an enormous influence for the solidification and clarification of their assistants' character. How did their ideals "get across" to their pupils and assistants? I cannot altogether explain it. They never said or implied—"Look at me. Imitate me. Profit by my example"—except in purely

technical matters. How to feel a spleen, how to percuss out the "dull" areas corresponding to the position of the healthy or diseased heart, how to listen for the earliest evidences of tuberculosis in a patient's lung, how to hunt through a microscopic field for the parasite of malaria—in these matters I often heard our medical chiefs ask their internes to watch and imitate them.

"But when it came to the 'technic' of courtesy to most unpromising old wrecks of humanity, of patients with the fretful whimsies of the convalescent, to faithfulness throughout tiresome physical or chemical examinations which one 'knew would be negative' (i.e., fruitless) because one had done them hundreds of times before and never yet found what one sought, when it was a question of confessing one's failure and facing one's utter helplessness in a moment when everyone looks to the doctor for heroic efforts to stage off death—then there was no teaching given, no moral pointed out, no consciousness of setting an example. Yet ethical ideals were transmitted, all the more perhaps, for the absence of any consciousness on the part of the 'chief' that he was doing anything but 'minding his business'."

The teacher ordinarily is in a very comfortable place. He sits upon a raised platform in a comfortable chair and comfortably lays down the law, tells stories, or questions neophytes on a subject familiar to him. But in hospital work a teacher is often in a very strained position, with a very tired back, or with a still more tired mind, as he reads for the thousandth time a description of the human carcase, written in the cramped and arid style traditional in hospital records. Patients, too, are fractious and unreasonable; humiliatingly often our remedies do no good; our failures stare at us in dumb reproach out of the sick man's eyes. Or work at the hospital is never finished, yet we have still our living to earn after we have finally torn ourselves away from the wards.

My teachers at the hospital bore these and many other annoyances. Yet they not only worked with a faithfulness almost contagious, but they maintained and shared their enthusiasm, which may here be conveniently defined as the power to rejoice as one sees, and makes others see, what at first is invisible. I have seen my "chief"—Dr. F. C. Shattuck—step back from a bedside with staring eyes and outstretched hands—"God bless my soul! Did you ever see anything so beautiful as that?" "That? What?" Well, so far as the rest of us could see it was the brown and wrinkled "stomach" of an emaciated Chinaman who had recently vomited a very offensive substance



which still stood in a basin by his bedside. But "that", as my "chief" saw it was a delicate wave of intestinal movement, faintly visible through the abdominal wall and casting a moving shadow which traveled silently across from right to left, outlining the course of the large intestine (ordinarily invisible) revealing the fashion of its action, and above all, throwing important light on the cause of this patient's sufferings, hitherto in doubt. We had seen a very unpleasant and rather aggravating specimen of sick humanity. The "chief" had seen the graceful action of a mysterious living organ which, ordinarily, we see only when the life has gone out of it. He had seen the wonders of unconscious physiologic action, purposeful and accurate beyond anything that we know in the domain of consciousness, yet pathetically invariable in its behavior, so that (as in this poor Chinaman's case) it continued its usual suave, unresting activity, even when the only result was torturing pain. What a mystery is an organ's super-intelligent and exquisite motion, steadily continued when disease has rendered such continuance only a mockery and an agony, yet still deliberate, unceasing, beautifully accurate and full of grace! That is what our chief saw, and the beauty and the horror of it all mingled with his triumph in having discovered what we had not been sharp-sighted enough to see, in having put his finger on the cause of the sufferer's malady and showed the path to be followed in attempting his relief. It was not ethics that we learned from such an outburst. It was the power of wonder, something underlying ethics, something akin to religion.

Another picture comes before me. We are in the crush and turmoil of an out-patient clinic—female medical—where throughout a long morning we try to solve difficult puzzles, to distinguish and identify faint sounds with the stethoscope, to sift and balance contradicting evidence, to cheer down-hearted sufferers and to keep our tempers. Human figures, voices, smells weave about over our heads as we stoop down, at our knees when we stand upright, over our shoulders, under our up-raised arms. Bells jangle, babies (in the adjoining clinic) squall. And in the midst of this we have to write well-considered judgments into records that others must depend on for guidance and to make decisions affecting perhaps the whole future life of a patient and his family. Moreover, to anyone who is sensitive to the mood and to the facial expression of those close around him the faces and tones of the patients are often a greater trial than the physical distractions of sight, sound and odor. On the day that I am recalling it was 12:45 and we had been at it since 9 o'clock.

My out-patient chief was an elderly man, delicate in health, fastidious, gentle, sceptical of medical wisdom, slow in all the mental and muscular movements for which such a clinic demands swiftness. He had been toiling through his morning's work—just as he always did—patiently, steadily, but quite without enthusiasm. He was now seated on a three-legged stool, with a towel across his knees, peering through his spectacles at a student's record of a woman patient whom he had examined earlier in the morning and was next to see and advise before she left.

She came waddling towards him with a heavy frown. Her expression of blazing scorn was combined with an hereditary and ingrained gloom, expressed in half closed eyelids and a drooping mouth. It is an expression terribly familiar in out-patients clinics. It says: "Leave all hope and all good opinion of yourselves ye who enter here", says it at a moment when one most needs hope and confidence. But it is also particularly irritating. For it seems to accuse you of neglect, folly and incompetence. If you can face it with a decent composure and with a brisk and business-like manner, it is ordinarily the best you can do.

I marvelled, then, when I saw the chief look up from his reading and beam at this minatory and demoralized female. His smile had a welcoming warmth and, slightly rising as she approached, he motioned her to a chair, with: "Sit here, if you please, marm". It was all in that last and most unexpected word—old fashioned courtesy, deference, charming modesty. He brought the atmosphere of a summer garden to meet this miasmic fog. The fog did not yield. The woman showed no slightest appreciation of his kindness, no melting of her scorn. But he carried through the interview as he had begun it and still bowed and smiled to her oblivious back as she stumped sullenly away.

He had no consciousness that anyone was watching him, no desire to teach, and, I fancy, considered himself a failure at the end of that morning, as he so often described himself in general. But at least one of his assistants learned some ethics that day.

I have tried to bring out here the contrast between the comfortable security of the academic platform where the teacher is seen by his pupils in full control of the situation, adequate and successful because he enjoys very special advantages, and the medical teacher seen in the midst of difficulties, grasping at expedients, half a failure, but wholly drenched in reality. Surely it is in the presence of the latter that the world's best lessons in ethics are learned.

(To Be Continued.)

## Current Events.

### NEW JERSEY ANNUAL HEALTH CONFERENCE.

Henry B. Costill, M.D., Director,

New Jersey State Department of Health.

A "round-table discussion" of pressing local health problems of, and by, local health officers was an innovation tried at the Sixteenth Annual Conference of State and Local Health Officials held at Trenton, New Jersey, February 19-20, 1926.

The first question discussed was that of the advisability of discontinuing both placarding and terminal fumigation in cases of communicable disease. The consensus of opinion seemed to be that placarding was justifiable because of its educational effects; although this was denied by several speakers. The health officers questioned the real protective value of fumigation, but several doubted the advisability of disabusing the minds of the public, who have for years been taught that fumigation is necessary. It was the general opinion, however, that terminal fumigation should be discontinued.

The second question was that of the practicability of requiring the antirabies vaccination of dogs. The benefit derived from this requirement in Orange, New Jersey, was described by the local health officer, and upheld by other speakers. The question of a provision for muzzling as an alternative was considered, but no conclusion was reached.

Adequate sanitary supervision of swimming pools was discussed by the sanitary engineers of the State Department of Health, and local health officials. The standard of purity recommended by the American Public Health Association was advanced and met with no objection from the health officials present.

The last question to be discussed was that of the practicability of the examination of all food handlers. After a thorough discussion of the value of such examinations, the practical administrative difficulties were considered. A history of previous attacks of communicable disease, indicating the need for a complete physical examination with laboratory tests of excretion, was offered as a basis for a preliminary sifting out of those persons most likely to spread infection. The importance of milk as a vector of infection suggested the desirability of examining the handlers of milk products, if it be impractical to include all persons who handle food.

The evening session was devoted to formal papers. Dr. A. W. Freeman, Professor of Public Health Administration at Johns Hopkins University, discussed the education of sanitarians, pointing out the need for adequately trained health officers who have had not only a medical degree but training in public health as well. Dr. Freeman dwelt on the value of experience, concluding that the man with adequate training and experience was by far the most valuable health officer. He suggested that the man with experience, but no diploma in public health, would prove more valuable than the man with training and no experience.

Dr. William H. Park, Director of Laboratories, New York City Department of Health, told of his recent studies of scarlet fever. He reviewed the work which led to the adoption of the Dick test, and reported his own work. He has found that

susceptible children treated with 5 large doses of toxin became Dick-negative, whereas with 3 smaller doses the results were not satisfactory.

The last paper was that of Dr. George A. Soper, Managing Director of the American Society for the Control of Cancer. Dr. Soper reviewed the work of cancer research, both abroad and in this country; he told of the facilities for future work; and summarized the modern findings of cancer research. His paper was in a hopeful tone, for he showed that true research in cancer has been of but few years' duration and that already great strides have been made.

The evening meeting began and closed with the showing of a one-reel motion picture film on diphtheria control. The films were produced by 2 insurance companies and attack the problem from different angles.

The meeting on the following day was the usual business meeting of the New Jersey Health Officers' Association, at which time Miss Lenore Young, Health Officer of Orange, was elected President, and Dr. A. S. Fell, Health Officer of Trenton, was elected Vice-President.

### VERDI'S MASTERPIECE TO AID DOCTOR'S HOME.

Announcement has been made from the office of the Physicians' Home, Inc., that the "Requiem Mass", by Verdi, will be rendered by the Metropolitan Opera Company, at the Metropolitan Opera House, New York City, Sunday evening, April 11, 1926, and that the proceeds derived therefrom will go toward purchasing the Knox Estate at Ridgefield, Connecticut, for the purpose of establishing a "Home" for aged and incapacitated doctors. This mass is considered by many to be Verdi's greatest musical production and, while it has had but few renditions outside of churches, it has always held a very high place in the esteem of all music lovers.

The cast to render the Requiem on this occasion will include: Signor Beniamini Gigli, tenor; Madame Easton, soprano; Signor Mardones, basso; and Madame Telva, mezzo-soprano. M. Serafin will conduct, with the full orchestra and chorus.

Boxes and reserved seats for this benefit performance may be secured by letter, telephone or wire from the office of the Physicians' Home, Inc., Times Building, Broadway and Forty-second Street, New York City. Among those who have already reserved boxes are: Governor Alfred E. Smith, Hon. Charles Evans Hughes, Cardinal Hayes, Rabbi Joseph Silverman, Mayor James J. Walker and Hon. George Gordon Battle who has just accepted the chairmanship of the Board engaged in securing a Foundation for the Physicians' Home.

In this connection it may not be amiss to explain that the estate of the late Col. Edward M. Knox, which represents an investment of approximately \$1,000,000, can be purchased as one of the units of this National Home movement for the sum of only \$125,000. The estate is locally known as "Downsby Manor" and comprises 350 acres of productive farm land, with a manor house, of 50 rooms, situated on a commanding hilltop, and 14 other scattered buildings. The whole estate is as charming and healthful a bit of countryside as may be found in New England and it embraces woodland and meadow, with gravelled paths and broad roadways traversing the whole. Facing the main entrance to the manor is an Italian Garden of great artistic



beauty, and from a tower in the nearby woods one may gain a panoramic view extending into the 4 states of Connecticut, New York, Massachusetts and Vermont.

The present object of the Directors is to have several such units comprising the national plans: One in New England to function for that district and New York, New Jersey, Pennsylvania and Delaware; one in the Middle West for tributary states; one on the Pacific Coast; and, one in the Southland. The Caneadea Unit, originally dedicated to old physicians by Dr. Stephen V. Mountain, of Olean, New York, will still be maintained because it was the great success of this venture that emboldened the directorate to launch the larger project; the Caneadea Home has been filled long since.

This is a most worthy movement and merits the considerate attention and active support of every physician in the land; at least let those of us who are within easy travelling distance of New York subscribe to this musical benefit performance.

### THE SOURCE OF VENEREAL INFECTION IS IMPORTANT.

Henry B. Costill, M.D., Director,  
New Jersey State Department of Health.

Forty houses of prostitution, about 100 professional prostitutes "on their own", and 200 clandestine prostitutes is the record of foci of venereal diseases named by the patients infected and reported to the State Department of Health last year by the practicing physicians of New Jersey. An excellent record, for these reports are the basis for all preventive measures against venereal diseases.

The houses of prostitution were referred to the appropriate county prosecutors with request for an immediate investigation and a demand that prompt repressive action be taken. The houses were closed; some to reopen later, for the keepers cannot be prevented from obtaining their liberty under bail until trial, at which a conviction can be secured. It was in one of the most notorious of these, the French Hill House, that one of our State troopers was killed recently while gaining evidence to confirm the report from a practicing physician which stated that the place was operated as a brothel and that his patient—one of several so reported—had been infected there. Most of the other places reported had remained closed following arrest of the keepers, and many of the inmates are now undergoing treatment at state institutions.

The "free-lance" professional prostitutes are referred either to city police or county prosecuting officials with the request for investigation and arrest if they are found to be habitual sex offenders. The clandestine prostitutes and some of the professionals are referred to the local health boards, which are empowered by law to investigate and to require medical examination of such cases. Such persons as may be found suffering from a venereal disease are required to undergo treatment, or if they refuse they may be isolated by the local health officials. This is the procedure adopted by the State Department of Health to be followed upon receipt of information from the physicians of New Jersey.

Has the work resulted in reducing venereal disease? Frankly, we do not know. The case reports do not indicate a reduction, for last year 8855 venereal cases were reported; a great increase over any previous year. On the other

hand, this increase of reports does not necessarily imply a corresponding increase in the incidence of gonorrhea and syphilis, for it may be due to a number of factors, such as the provision for reporting at the time laboratory specimens are submitted, the use of the franking privilege for case reports, etc.

The opinion of individual physicians about the number of venereal cases is conflicting; some believe that the incidence of both gonorrhea and syphilis is decreasing because they see fewer cases of recently acquired disease. This belief is supported by statistical evidence, for a study of the reports of the first 5 years of venereal disease reporting showed a progressively decreasing proportion of new cases as compared to old cases. On the other hand, some physicians see no evidence of a decline in the number of venereal infections, especially of gonorrhea. Whether the diseases are, or are not, being reduced, it is evident that the only hope for controlling them lies in finding the persons who most frequently transmit gonorrhea and syphilis, and stopping the spread of infection.

The most common source of infection is the prostitute, both professional and clandestine, and these can be, and are, detected most easily by information given by the persons whom they infect. It is our opinion, based upon independent vice surveys, that the professional prostitutes named in physicians' reports during the year 1925 included a large proportion of the most dangerous sex offenders. Not only are we convinced that the information given by patients is the most effective means of obtaining original notification of the existence of brothels or infected professional prostitutes, but we are certain that this is the only means by which a continuous check can be kept upon the road houses of the state.

It has been stated repeatedly, and our observations confirm the logic of the contention, that brothels cannot exist without the connivance of some members of the local police force. If this assumption is true, concrete evidence of the existence and harm of such places is needed so that effective pressure may be brought to bear upon higher police officials to compel the enforcement of laws which would otherwise continue to be violated because of the inaction of subordinates.

Several times last year police officials asked us to put them in touch with reporting physicians so that they might obtain evidence against brothels or individual prostitutes. We believe that this information should not be given. It is unnecessary, for ample direct evidence can be obtained by the law officers as they need it; therefore, the State Health Department in the future will not permit the use of the name of any physician or the patient reported by him in any legal action arising from the evidence originally obtained from the physician's report.

The importance of venereal disease prevention to the health of New Jersey, and the desirability of supporting the Governor in his attempt to rid the State of these law breakers, leads us again to urge all physicians to ask each recently infected venereal patient to tell, if he knows, the source of his infection. If a brothel or a clandestine prostitute be named, that information should be transmitted without delay to the State Department of Health upon the usual report forms.

### Its Purpose.

"Who invented the hole in the doughnut?"

"Oh, some fresh air fiend, I suppose."—*Amer. Legion Weekly.*

## Communications.

### A VISIT TO THE MOSES TAYLOR HOSPITAL.

(Letter from John Hammond Bradshaw, M. D.,  
F.A.C.S., Orange, N. J.)

I want to present a few remarks about my visit to the Moses Taylor Hospital, at Scranton, Pennsylvania, where I enjoyed seeing, and feeling as well, a large amount of surgery.

I was met at the Scranton Club by Dr. Wainwright, Chief Surgeon of the Moses Taylor Hospital, who had kindly arranged a meeting of the staff of that hospital that evening, postponing an earlier meeting, in my favor. After an excellent dinner at the club we motored to the hospital where about 15 doctors were preparing the program for the evening.

These staff meetings occur every week and several of the surgeons told me that they got more benefit out of them than from their other work at the institution. A series of patients was brought in on stretchers and every member present was not only asked but expected to give a diagnostic opinion, after hearing the House Surgeon's report. Each opinion was recorded on the blackboard. After this was done each man in turn was permitted to make such examinations as he desired, and was then asked if he wished to modify his initial diagnosis; in many cases this was done. The pathologist, the radiologist and other experts who had seen the case then rendered their reports, after which, for a third time, each man was requested to give his final diagnosis; at this time many again shifted their opinion. The results were then totalled up on the black board and the prevailing diagnosis was placed against the name of the patient. As several of these patients were to be operated upon the next day, everyone was invited to be present at the operation. This made the results of the operation of interest to all. One or two men then read short papers and the meeting closed about midnight with light refreshments. I want to emphasize the impression that I obtained from the clinical meeting, which was this: it showed an unusual, scientific, accurate investigation and a serious purpose prevailed during the whole session.

After this meeting, without proper preparation, I took a "joy-ride" down a flight of marble steps and landed at the bottom with a broken leg. The next morning, after a sleepless night, I was able to appear in the operating room and to witness 7 or 8 rather difficult operations. The first operation of the morning was to correct the results of an impact of a 5-ton rock which fell on the small of the patient's back while he was in a stooping position. This jammed, in rather a miscellaneous fashion, about 6 of his vertebrae. The operation that ensued was one of restoration, being a very much modified Hibbs, but after the plaster of Paris bandage had been applied the patient was given a good prognosis barring the desired ankylosed position of 6 of his dorsal vertebrae.

Another operation that morning was upon one who had a rock fall on his thigh, knee, leg, ankle and foot, presenting a rather sorry spectacle. The surgery that was performed upon him rendered it highly probable that he would not only

save his leg but be able to work at his trade in due time with the intended ankylosed knee.

Another case of more than usual interest was an excision of a bone cyst of the inferior maxilla. My own personal opinion of this case, because of the huge facial deformity, distortion and size of the growth, was that it was a case of sarcoma. I was wrong. Dr. Wainwright removed the cyst with his usual skill, although during the operation he was playing tag with the facial nerve, carotid artery and various other minutiae that rendered the operation most difficult.

I will not take your time to tell of other cases but this will suffice to show you that I was well repaid for my spent time, if not the broken leg that resulted from my visit to Scranton.

### LETTER FROM DR. MORRISON CONCERNING MEMBERSHIP STANDING.

To the Editor:

The Official List for 1926 is being issued with the April edition of the Journal. We are pleased to report that the total membership at this date is fourteen in excess of the total at the time the 1925 Official List was published. Thus our prediction that the increase in dues would not affect our membership has been verified. More names are coming in every day to be added to the list, and I fully expect that by the date of the Annual Meeting in June, our total membership will be 2250.

Technically, we carry no delinquents and counties sending in as many names as they reported last year at this time, are carried in the 100% paid up column of the Summary. Thirteen of the counties are on this list, including the larger counties of Mercer, Atlantic, Passaic, Hudson and Essex. This is an improvement we have never been able to report before.

The interest shown in the prompt payment of dues is only in keeping with the increased activity and interest manifested in the Component Societies all over the State.

I wish to take this opportunity to thank the Officers of the Component Societies for their zeal and assistance in compiling this list.

Yours very truly,

J. B. Morrison,  
Recording Secretary.

### ANGIONEUROTIC EDEMA.

The following letter, referring to an "original article" published in our February issue, seems worthy of publication for the benefit of those who may be confronted by distressing and obstinate cases of this affection:

"I was interested in the article by Dr. Wm. C. Meininger, on the "Treatment of Angioneurotic Edema". I have had some experience in the treatment of this condition, having under observation at this time a gentleman afflicted with this disorder who has consulted the best in the profession without results. He has been taking radium emanations in drinking water, and is now practically cured. The literature on the indications for radium emanations speaks of this as practically a specific for this condition. I merely call attention to this; it is worth a try."

Very truly yours,

Francis H. Glazebrook, M.D.,  
Morristown, N. J.



## Lay Mirror Reflections.

At a season of the year when so many deaths are attributed to influenza or to pneumonia, without mention of the early or preceding stages of an affliction that terminated fatally, two recent newspaper items seem worthy of consideration by members of the profession as well as of the laity.

### NO MALADIES ARE MORE COMMUNICABLE.

(Topics of the Times, N. Y. Times, Mar. 24, 1926)

"People do not regard 'colds' as seriously as they should," says the head of our Health Department, and then adds: "Persons sniffing or coughing should voluntarily isolate themselves as far as possible. I wish I could bring it home to people just how important it is that a 'cold' should be treated like other communicable diseases."

That being sound doctrine in the judgment of all doctors, why do not Dr. Harris and his professional colleagues at least begin a campaign for bringing about the action which they know would be so much for the public benefit? That, perhaps, is not much more than a "rhetorical question", for it hardly is imaginable that people ever will become sufficiently enlightened to realize that when they have a "cold" they are a danger to everybody who comes near them.

It is true that death as a direct result of a "cold" is rare, but it is far from true that there are no deaths from the maladies for which "colds" prepare the way. Between "colds" and influenza the doctors see a difference, but not much is known about the bacteria causing either. They are near relatives, and possibly their unlikeness is only variance in energy between strains of the same species. Both are usually "mixed infections", and that may account for the difficulty that lies in the way of effective treatment for either.

### CONTAGIOUSNESS BEYOND DOUBT.

(Topics of the Times, N. Y. Times, Feb. 25, 1926.)

It is reported that "Mrs. Coolidge now thinks that colds are contagious." If she does, she has reached a sound conclusion. Probably, like almost everybody else, she has known it for most of her life, and any present statement of the subject she has made simply expressed her belief that she "caught" the cold she has from the one from which the President recently suffered for several days.

She may have done so, or she may have been the victim of the same conditions and exposures to infection that ended in his attack. But about the contagiousness of colds there is no doubt. Indeed, it has seriously been suggested that everybody with a cold should be subjected to a rigid quarantine. It probably never will be done, but there would be excuse for it.

### NEGATIVE VERSUS POSITIVE.

(Topics of the Times, N. Y. Times.)

In The New York Medical Week, which "represents the activities of the medical organizations of Greater New York", this column is scolded for saying the other day that "if so many of our doctors were not so obstinately prejudiced against chlorine gas as both preventive and cure, we might escape [an influenza epidemic] with a scare this time."

To justify the scolding it is asserted that chlorination was tried here by our Board of Health and by several physicians, and the claims made for it were not found justified.

But does that settle it? New York doctors know, or ought to know, as well as anybody, that a little positive evidence outweighs vast amounts of negative evidence, and that unless they are ready to charge the military medical authorities in Washington with deliberate misrepresentation of facts, the failures here prove nothing except that the gas here was not administered properly.

### ANTIVIVISECTION RECRUITS.

How far afield an otherwise intelligent, well meaning citizen may wander when he attempts to deal with scientific matters entirely outside his usual realm of thought is beautifully exemplified in a letter from Poultney Bigelow recently published in one of the New York daily papers.

In a diatribe against vaccination, endorsing a recent pronouncement of Edwin Markham's he says: "I have seen diseases multiply faster than serums could be manufactured for their eradication." What a foolish statement; to say nothing more uncomplimentary of it. A considerable number of therapeutic serums have been evolved in the past 20 years; how many new diseases has Mr. Bigelow seen develop within his lifetime?

It is upon such loose, irresponsible, utterly unreliable statements that antivaccinationists and antivivisectionists are prone to base their absurd conclusions concerning disease and animal experimentation. Unfortunately, the reading public, trustful of a man who has earned respect for his opinions in his legitimate field of work, is apt to attach undue and unmerited importance to his ignorant remarks upon scientific matters. Mr. Markham and Mr. Bigelow would do well to confine their publications to subjects with which they are more familiar.

### THE CONTROL OF RABIES.

In view of some recent actions in the House of Assembly of New Jersey when that body was considering the proposed act to require antirabic vaccination of all dogs, some of our newspaper articles of recent date are worthy of contemplation. On two occasions during discussion of the proposed statute the House disgraced itself by permitting a few members to indulge in "horse play" when all should have been giving serious thought to an important problem, a condition that threatens the lives of a number of their constituents, perhaps of some of their own group. True, the Bill was finally passed by that body but only after so much time had been frittered away that not sufficient remained to enable transmission of the Bill to the Senate for action. Until the next General Assembly convenes,

in 1927, protection of the commonwealth against rabid dogs must depend still upon the action of county and town governing bodies; a number of small communities have provided for protective vaccination of dogs, but all have not, and unfortunately neither the mad dog nor the healthy dog is capable of recognizing district boundary lines.

Representatives of the Society for the Prevention of Cruelty to Animals make much of their sympathy for dogs and the desire to save these creatures from the suffering of vaccination. As a matter of fact there is, of course, no suffering attendant upon a proper vaccination, but, even if there should be, we wonder which the dogs would prefer—to endure the momentary slight pain of a needle prick or to be stoned by scared citizens and shot by the policeman under the impression that the animal is rabid. Rabid dogs have caused much suffering among human beings and a number of deaths of innocent persons, through transmission of rabies, but, on the other hand, hundreds of healthy dogs have been needlessly killed because of a "mad dog scare". Would it not be far more kind and considerate of dogs to safeguard them against rabies and thus protect them from death by either the disease or the violence of scared humans?

## LAWMAKERS MUST END THIS RABIES SCOURGE.

(Editorial Newark News, March 23, 1926.)

On nearly every working day of the first ten weeks of this year the state laboratory at Trenton received for examination the head of a dog which turned out to have been mad. On two days in the middle of this month the number ran to eleven mad dogs.

New Jersey has had more than 600 proved mad dogs in three years and in the same time 550 persons have had to be treated with protective vaccine against rabies as the result of dog bites. Of these, eleven—one in fifty—died, though each of the eleven had received the protective treatment.

There is a bill pending in the Legislature to control this evil, but those who control that body have been so concerned with highly "practical" politics that it has had no time to devote to legislation that would protect the lives and health of the people. \* \* \* \*

A measure that is as protective of the dog as it is of the dog's human friends leaves no room for protest from even the minority of individuals whose organized opposition to a sound law has conserved rabies in New Jersey.

## HEALTH AUTHORITIES REPORT NINE PERSONS BITTEN BY RABID DOG.

(Newark Evening News, March 19, 1926.)

Investigation by Charles F. Conrad, an inspector of the Health Department, has disclosed that a number of persons were bitten by a rabid dog near the Hawthorne Avenue School Wednesday afternoon, in addition to those whose names were first made public by the authorities.

In a report to Dr. R. N. Connolly, chief of the

bacteriologic laboratory, Mr. Conrad said he believes two men and a boy passing on a bicycle also were bitten. He did not learn their names. The list of those bitten as reported and their injuries follows:

Gloria Slatin, three years old, 404 Hawthorne Avenue, laceration under the eye. Child was bitten as her mother wheeled her in a carriage.

Isadore Diamond, ten, son of Abraham Diamond, 390 Hawthorne Avenue, owner of the dog, on the lip.

Albert and Sarah Seintz, twins, ten years old, 390 Hawthorne Avenue; former on right leg and his sister on the shin.

Miss Fannie Seintz, same address, nineteen, on the heel.

Charles H. Shelten, 98 Dayton Street, right leg.

Bernard Peskin, twelve, 15 Wolcott Terrace, on right ankle.

Mrs. Bessie Weiss, 347 Chadwick Avenue, on leg.

Examination of a bite suffered by Patrolman Thomas J. Golden of the Sixth Precinct Police Station, who with Patrolman McDonald killed the dog, as it clung to the former's trousers, disclosed that the skin on his leg was not broken.

All the persons bitten, with the exception of Patrolman Golden, are receiving Pasteur treatment, and Dr. Connolly is anxious that they get in touch with his office. The Health Department is ridding the neighborhood of stray dogs, as they may have been bitten by the dog.

The dog, a small white poodle, appeared in the street snapping at passersby, as school was being dismissed. It was traced to the cellar of the owner and shot. Examination of its head shows the dog was rabid.

## THROUGH THE SMOKE SCREEN.

(Camden Morning Post, March 26, 1926.)

Merchantville society women are up in arms because, they say, policemen lure their pet dogs into the streets to shoot them. In time, of course, they will meet with some opposition from other Merchantville society women who have children instead of pet dogs.

So far, according to the testimony given before Merchantville borough council, only seven dogs have been killed. The crusade against the dogs was started after sixteen children had been bitten by stray canines. The protesting women of Merchantville would have better backing from public sentiment if they had withheld their protests until the score was at least even.

## DOGS, MUZZLES, GUNS.

(Editorial, Camden Morning Post, Mar. 26, 1926.)

Sensible local laws regulating the keeping of dogs are for the public good. Also, they work for bettering the condition of the animals themselves.

The time is coming when the sun will bombard us with heat spears, and stray dogs are a menace.

Some of the people who are now so concerned for their pets will leave them to roam the streets while the family's away.

It is impossible to discriminate, saying this dog should be muzzled, but that one doesn't need the muzzle.

One law for all, is the only way.

## DO WE WANT MORE SMALLPOX?

(Saturday Evening Post, March 27, 1926.)

Much attention was attracted by a bulletin published last June by the League of Nations.



from which it appeared that the number of smallpox cases reported in the United States in 1924 was 51,429, or nearly double the figure for 1923. If the statistics published by the League are correct, this nation, in 1924, won the unenviable distinction of having more cases of this particular disease than any other country on the globe.

"The greatest prevalence", said the bulletin, "occurred in the Pacific and East North Central States. California reported the largest number of cases followed by Michigan, Ohio and Indiana. \* \* \* The prevalence of smallpox in the United States is in direct ratio to the enforcement of vaccination, which is more general in the Eastern States than elsewhere."

Dr. C. C. Pierce, writing in the October, 1925, issue of the American Journal of Public Health, depicts the situation even more strikingly. Doctor Pierce is senior surgeon of the United States Public Health Service in Chicago. What he has to say is singularly impressive, because it has so little concern with medical theories and deals so largely in facts which can be verified by anyone who will take the trouble to go to the nearest library and check the official statistics he employs. The independent investigator will find, for example, that the report of the Surgeon General, United States Public Health Service, for 1924, stated that smallpox is the most widely distributed plague in the world and that approximately one-fifth of all the cases of it reported during 1923-24 occurred in the United States.

According to Dr. Pierce, and overwhelming evidence excludes all doubt as to the correctness of his statement, "A study of detailed data shows that the number of cases of smallpox that occur each year has a very definite relationship to the number of unvaccinated persons in the community. States that have good vaccination laws have few cases of smallpox during a period of years. Massachusetts, with good vaccination laws, and Minnesota, with no vaccination law, during the years 1913 to 1923 are good illustrations of this. During these eleven years Massachusetts had 457 cases and Minnesota 53,152 cases of smallpox". The population of the Bay State is about fifty per cent greater than that of the Western commonwealth.

However the figures which express the relationship are compared, the open-minded investigator is forced to the same conclusion. Consider what happened in California. In 1919, according to the bulletin of the League of Nations, there were 2002 cases of smallpox reported. Vaccination laws were repealed, and in 1924 the number of cases rose to 9425. During the years 1917 to 1920, inclusive, similar causes produced similar effects in the state of Washington in even greater proportion. And yet there are persons who would say that these experiences are mere coincidences!

Smallpox is always a live issue. During the past few years it has been obtruding itself on public attention in its own unpleasant deadly way. We are now squarely faced by the question of what we are going to do about it, if anything. If we are willing to see this loathsome and deadly disease thrive and flourish, we have but to ignore it and be patient. If we want more of it, there is not the smallest doubt that we shall have it. Physicians and health officers cannot stamp it out. They do not make the laws. It is all they can do to enforce them. Legislatures take their cues from their constituencies and do their bidding. The voters are the court of last resort. They it is, and not the doctors, who will have the final say in the matter. \* \* \*

## Observations from the Lighthouse.

### ARTIFICIAL INFANT FEEDING.

In the last quarter of 1925 the Archives of Pediatrics published a series of original contributions dealing with this problem from several different angles. The question involves so many points of practical interest to every practitioner that we have deemed it appropriate to devote our entire space this month to an abstract review of these special articles. In a foreword to a group of 4 of these papers, (Arch. Ped., 42:721, Nov., 1925) Philip M. Stimson, explaining the reported investigations, says: "A number of proprietary milk preparations, are described in one or another of the papers. No attempt has been made to include all the available proprietary preparations of a given kind, but merely to mention some of the better known. But, on the other hand, the authors have made every effort to obtain accuracy in their information concerning those proprietary products which are mentioned by name, in practically every case writing directly to the manufacturer for specific information." We would also call attention, in advance, to 2 important points: (1) That in abstracting these articles we have not considered every one of the artificial foods referred to; and, (2) that despite all the favorable things said of protein milks, artificial food mixtures and cereal formulas, one must not lose sight of the fact that modified fresh cow's milk, when available, is probably still the best possible substitute for breast milk.

Frank Howard Richardson, (Arch. Ped. 42:651, Oct., 1925) discussing breast feeding, past, present and future, says that by the beginning of the twentieth century our periodic literature had become the repository of a strange assortment of unnatural substitutes for mother's milk, and it was in the first decade of this century that Ross Snyder, of Birmingham, started pediatricians on the slow climb back to normalcy by demanding that the Section on Diseases of Children give as much attention to the problems incident to maintaining natural feedings of infants as to those connected with artificial feeding. It remained for Julius P. Sedgwick, of Minneapolis, however, to demonstrate convincingly that breast feeding was not only the most desirable, but also the most available, form of sustenance if intelligently encouraged. To offset the claim that the favorable results in Minneapolis were somehow due to the racial stocks prevailing there, the Division of Maternity, Infancy and Child Hygiene of the New York State Department of Health, acting in close coöperation with the Brooklyn Pediatric Society, undertook to determine whether in an urban and suburban population along the Atlantic Seaboard, interest plus organized effort, rather than the type of mother concerned, would not prove the determining factor. The district chosen was Nassau County, Long Island, an area presenting most varied racial components, with the "American mother" predominating, however. It is only fair to mention this as a distinct handicap, for it was found that the "American mother," whether through her own fault or that of her physician, was lowest in the scale when it came to evaluating the different racial stocks as milk providers. The fact that, in spite of this preponderance of relatively poor milk producers, the Minneapolis figures were just a shade bettered, would seem to make good the claim that what has been done in the east and northwest

can be done anywhere in the country. Also to be taken into consideration was the appalling handicap that, during the year and a half that the work was carried on, it seemed impossible to get notifications of birth before 3 to 5 weeks after delivery. At the earliest possible moment, however, each case was assigned to one of a group of visiting trained nurses, who, after applying to the physician signing the birth certificate for approval and instructions, sought to impress upon the new mother the practicability, as well as the desirability, of breast feeding.

All the data obtained in this investigation have passed through the Bureau of Vital Statistics. The point of greatest interest is that over nine-tenths of the infants remained on the breast for one month, seven-tenths for 6 months and six-tenths for 9 months. Only 2 types of feeding were considered—breast feeding and artificial feeding,—it being recognized that one of the foundation principles upon which successful breast feeding depends is the conception that **complementary** feeding, as distinguished from **substitute** feeding conserves and does not endanger breast feeding. Other deductions of vital interest related to the decreased mortality in the breast-fed group as compared with the infants artificially fed; the decreased infant mortality for the county during the period of demonstration; the diminution of morbidity in the breast-fed infants, most marked in gastro-intestinal disorders but also notable in respiratory disease and in infectious diseases, such as whooping cough, measles and chicken-pox.

Most gratifying of all the results of this investigation is the fact that appeals have been coming in for information and for help in staging similar efforts elsewhere. Preliminary results at Hornell, reported by Wakeman at the Annual Meeting of the New York State Medical Association, at Syracuse, May, 1925, showed 98% of infants kept on the breast for the first month; 84% still nursing at the end of 6 months; complementary feeding employed with good effect; active supervision of all maternity patients during the nursing period; only one case of whooping cough contracted by a breast-fed infant during an epidemic of that disease. It is the belief of Dr. Richardson that these conditions may be realized by any community possessing sufficient interest in the reduction of infant mortality to inaugurate a campaign for the popularizing of breast feeding.

As a substitute for breast feeding, A. W. Bosworth, (*Arch. Ped.*, 42:563, Sept., 1925) discusses the value of sweetened condensed milk. He cites a series of articles by Lassablière (*Compt. rend. Soc. Biol.*, 81:764, 1918) in which it was noted that sweetened condensed milk possessed certain therapeutic properties not found in evaporated milk to which sugar had been added. As a result of his experiments, this author concluded that the method of preparing condensed milk brings about some chemical or physical change that cannot be duplicated by the mere addition of sugar. In support of this statement, a table is reproduced showing the superior results of the use of sweetened condensed milk as contrasted with that of sterilized milk and powdered milk in 18 cases of gastro-intestinal trouble in infants 4 months of age. Lassablière tried to demonstrate the influence of saccharose in a comparative study of the therapeutic action of sweetened condensed milk and the unsweetened condensed milk of commerce to which 10% saccharose had been added, the caloric value of the food being the same in all cases. The investigation showed

that the mere presence of saccharose did not wholly explain the results obtained with the sweetened condensed milk.

As it would seem that any artificial food used for infant sustenance should have a food value somewhere within the limits of the variations noted for normal breast milk, Bosworth compares a table showing the analyses of 32 samples of breast milk taken from mothers whose children were developing normally, with tables giving the composition range of sweetened condensed milk. One of the most popular brands of the latter contains 9% fat, 8.10% protein, 11.8% milk sugar and 42% cane sugar, while the average for the specimens of mother's milk showed 3.26% fat, 1.38% protein and 6.59% sugar. By means of 7 formulas covering feeding periods up to the twelfth month of age. The author shows how the sweetened condensed milk may be diluted until its values more nearly approximate those of average mother's milk. The fat contents of these formulas remain below that of breast milk, but this is in line with the modern teaching that the fat of cow's milk is not tolerated as well as the fat of breast milk. That the low fat contents may be compensated for by the cane sugar is in accord with von Pirquet's clinical experience showing that the fat in infant foods can be entirely replaced by cane sugar. As in the case with all artificial foods for infants, the sweetened condensed milk formulas are deficient in vitamin C, but the almost universal practice of feeding orange or tomato juice supplies this lack. In view of the fact that sweetened condensed milk is so extensively used for infants, the author hopes to accumulate clinical data upon the subject for publication.

Another form of infant food, first used by Camper in Holland in 1770, and now used in some form on the feeding wards of almost every children's hospital, is acidulated milk. (*Survey of acid milk in Infant Feeding*, by V. T. Weeks, *Arch. Ped.*, 42:722, Nov., 1925); This modification is advocated for many reasons: (1) it decreases the buffer action of cow's milk so that the acid of gastric secretion does not combine with the buffer substances in cow's milk, but is free to exert its action if producing an acidity which is optimum for gastric digestion; (2) the acid denaturizes the protein, making it more digestible; (3) the increased acidity also increases gastric motility and this in turn improves all gastric functions; (4) acid milk is not only sterile but has a definite bactericidal action; (5) it supplies high caloric value without undue volume in cases of malnutrition. The several types of acid milk in use are produced by the addition of either lactic, hydrochloric, acetic or citric acid.

Lactic acid milk has the largest following. When prepared by the addition of the lactic acid to cow's milk it has been found to have all the advantages of bacterially soured milk and none of the disadvantages. Brahdy has thus simplified Merriott's method of preparation: To the stock syrup solution (45 parts karo corn syrup and 55 parts water) lactic acid is added in the proportion of 1 teaspoonful to 1 pint. The acid and syrup mixture is then added with one minute's stirring to boiled or raw cow's milk. The clinical results of lactic acid milk have been excellent in every series of cases reported.

Mixing lemon juice with cow's milk has the additional advantage of supplying antiscorbutic vitamins. It may be added drop by drop to whole cow's milk (usually  $\frac{2}{3}$  milk to  $\frac{1}{3}$  water) with lemon juice in the proportion of 13 minims to 1 ounce of milk. Results obtained clinically



are comparable to those from lactic acid milk, but infants took the lemon mixture more readily and the stools were alkaline and more nearly resembled those of breast fed infants than was the case with any other modification. The advantage of vinegar is that it is cheap. In results it does not differ from other acids. It is added to cow's milk in the proportion of 1 to 15. Hydrochloric acid was preferred by Faber as being "the physiologic acid and more suitable for enzyme action." Among its disadvantages, however, are a sour taste (causing it to be refused often by infants) a heavy flocculent precipitate of casein, the occurrence of excoriation of the buttocks and danger of acidosis.

The commercial success of condensed milk in infant feeding has encouraged the invention of a process by which milk solids could be obtained in still smaller bulk, and at present several kinds of dried milk are in use on a comparatively large scale. (Resumé by Alice D. Weber, Arch. Ped., 42:735, Nov., 1925). The action of heat in the drying process produces certain changes in the dried milk, these being dependent upon the temperature and the length of time over which that temperature is maintained. Soluble salts of calcium are transformed into insoluble salts; lactose is said to be unaffected, except for a slight loss and a little charring; there is coagulation of the albumin and globulin; caseinogen is not coagulated and all observers agree that it is more readily digestible after heating; in fats, possibly a slight degree of oxidation occurs; the exact changes in lecithins are not known; ferments are destroyed in the process of drying. Generally, evidence so far indicates that vitamins are not destroyed, but that the quantity may diminish if the preparation is kept over a long period of time. The curd produced by rennet is reconstituted dried milk is flocculent and finely divided, while that in fresh milk is firm and tough. Although processes used in drying milk largely reduce the number of bacteria present, the product is not absolutely sterile.

The dried milk preparation discussed in this article include Horlick's Malted Milk, Powdered S. M. A., Mammala, Dryco, Nestles' Lactogen, and Klim-Whole. The data was secured from the literature published by the respective companies and from calculations made by the writer. According to the manufacturers, Horlick's Malted Milk is an easily digestible food, prepared from full cow's milk combined with extracts of malted barley and wheat, the starch of which has all been converted by the action of the diastase of the malt. At the University of Illinois, 1914, Wheeler and Biester carried out experiments on 3 successive generations of mice, fed solely on this food. As each generation developed and produced its young normally, it was concluded that this was a well balanced food, containing vitamins of milk and cereals adequate for proper nutrition. Analysis shows Horlick's Malted Milk to contain 67.95% carbohydrates—sugars, lactose, maltose and dextrins. It is claimed by the manufacturers that the large quantities of maltose are a distinct advantage, being more easily digested and assimilated than cane sugar or lactose.

Synthetic Milk Adapted was evolved by Gerstenberber who recognized the fact that the fat of cow's milk contained approximately 10% of low volatile fatty acids, whereas breast milk contained only 1.6%. By combining various animal and vegetable fats and oils he succeeded in synthesizing a fat that had the same saponification number, iodine number, Polenska number, Reichert-Meissel number and the same melting point

as the fat in breast milk. In addition, by using cod-liver oil in the mixture he added antirachitic and antispasmodic qualities. The result is a mixture similar to breast milk in its protein, carbohydrate, salt and water content. It is a simple food for well babies and in the thousands of cases in which it has been used during the past 8 years it is claimed that no rickets, spasmophilia or anemia have developed in full term infants fed in this food alone. It is contraindicated in diarrhea.

Mammala is said to be made from pure fresh cow's milk from which part of the fat has been removed and a portion of lactose added. It is dried rapidly by the Hatmaker process which consists in exposing the fresh milk to a temperature of 280° F. for not more than 2 seconds on heated revolving drums. The value of this preparation has been demonstrated to Mr. Hatmaker's satisfaction on his own child, who received no other food until she was 6 years of age. Her health during this period was said to have been remarkable and her development above the average. Her flesh is firm and her strength unusual. Mr. Hatmaker says that other infants have been successfully fed on Mammala and that these experiments have received the approval of several French pediatricians, among them the late Professor Budin of the French Academy of Medicine.

Nestles' Lactogen, according to the literature, is a homogenized, scientifically desiccated full cream cow's milk, intended for well, full-term infants. Dryco is a dried milk to which nothing has been added, but from which the butter fat has been removed. The antiscorbutic value, according to Hess and Unger, has been retained; it is moderate in fat, rich in carbohydrate and relatively high in protein content; said to be made from the best grade of milk of frequently examined herds and to be sterilized in the manufacturing process. There are two kinds of Klim—whole and skimmed—for both of which products the makers claim that the taste, odor and nutritive values of fresh milk are preserved, while the enzymes and vitamins are equally active.

Success in the use of dried milk for infant feeding is due to the fact that physical and chemical changes produced by the processes used so alter its character that it is usually better borne than cow's milk, whether raw, boiled or sterilized. Dried milk is easily and completely assimilated, is palatable, and the effect on nutrition is sometimes remarkable.

Of interest to the pediatrician in connection with these substitutes for breast feeding in cases of fairly normal infants, is an article by Blenkle (Arch. Ped. 12:743, Nov., 1925) on the use of protein milks with special reference to nutritional disturbances. Prior to 1910, he says, protein was looked on as one of the outstanding factors responsible for such conditions, but in that year Meyer reported the surprising results of a unique clinical experiment. He found that infants thrived on cow's milk casein and mother's milk whey, whereas when fed on cow's milk whey and mother's milk casein the same intestinal disturbances as encountered with ordinary milk mixtures, occurred. This interested Finkelstein to such an extent that he evolved a protein milk (Eiweiss-Milch), basing its wonderful efficacy on the theory that carbohydrates were really the cause of the majority of digestive upsets and that the infant had a high tolerance for protein the presence of which even favorably influences the tolerance for sugar and fat. According to Finkel-

stein's method of preparing Eiweiss-Milch,  $\frac{1}{2}$  oz. rennin is added to 1 qt. raw whole milk at 105° F., in a water-bath and kept at that temperature for one-half hour. The curd (fat and casein) is filtered from the whey (lactose, salts, etc.) through a linen bag, without pressure, for one hour in a refrigerator. The curd is then stirred into 1 pt. boiled water and washed repeatedly through a fine sieve until a uniform emulsion results. Then 1 pt. buttermilk is added, giving 1 qt. protein milk, which is sterilized by boiling, being constantly stirred to avoid clumping. Powdered protein milks are now obtainable everywhere; they can be kept over long periods of time; are easily prepared; and most of them are bacteria free. Some go so far as to include a satisfaction of the lactic principle of Marriott and preservation of the vitamins present, one preparation even containing added vitamins. They have all proved worthy of replacing Finkelstein's preparation when advantageous in particular cases.

Protein milk is indicated in every case of diarrhea in nurslings; in dyspepsia in bottle-fed babies; in marasmus, atrophy or decomposition; in acidosis; as a temporary complementary or exclusive prophylactic food for the new-born or premature or other infant needing a high protein intake; in cases of parenteral infection; in cases with low fat tolerance or where ordinary milk mixtures are not tolerated. A period of starvation, 6-48 hours long, should precede the use of protein milk, with forced feeding of boiled water or unsweetened fennel or green tea ad libitum, which should be continued throughout the illness, between meals, to relieve thirst. The toxic symptoms gone, protein milk is started at 3 ounces in 24 hours, given fractionally at 3 hour intervals. Finkelstein warns against prolonged starvation as it may result fatally.

There are still 2 other types of feeding which may hold out hope to ailing infants; the thick cereal mixture and the butter-flour mixture. (Eckhardt, Arch. Ped., 42:761, Nov., 1925). Thick cereal feeding is indicated where vomiting and failure to gain weight are persistent; where there is an idiosyncrasy for cow's or mother's milk; in cases of malnutrition, pylorospasm, pyloric stenosis, breast fed colic, acute gastritis, eczema and allied skin conditions; prematurity; and acute infectious fevers. In preparing the mixture 1 level tablespoonful of farina is added to 5-6 oz. skimmed milk, and to 30 oz. of the resulting mixture 2 tablespoonful of dextrimaltose and 1 tablespoonful of cane sugar are added. The mixture is then cooked for 30-60 minutes in a single boiler. If there is evidence of fluid deficiency, water may be given up to 4 oz. 3 or 4 times a day. As soon as the infant is taking the new foodstuff satisfactorily, cod-liver oil and orange juice are given and in many cases a vegetable diet is started at 4 months.

The principle of butter-flour feeding is that of high fat content, with the more volatile fatty acids removed, and a high carbohydrate content, while the protein is reduced to approximately the amount found in breast milk. This diet is indicated where high caloric feeding is required, where the child does not gain weight on a milk formula, in marantic infants, and in the presence of fat indigestion, as the modified fats will often increase the tolerance for fats. Griffith and Mitchell advise against the use of butter-flour mixture: (1) Where there is considerable diarrhea, (2) where there has been sudden loss of weight, and (3) in fever and intestinal disorders. The mixture is prepared by first browning 20 gm.

(2 teaspoonsful) melted butter, and adding to this 20 gm. (2½ tablespoonsful) flour; sugar 15 gm. (1½ tablespoonsful) and water 300 gm. (10 oz.) are then added, the mixture boiled for one minute rubbed through a fine sieve and later combined with milk in amounts varying with the patient's age and requirements. The usual proportions are 3 parts mixture to 2 parts milk or 2 parts mixture to 1 part milk.

The chemistry of thick cereal feeding is essentially that of the carbohydrate, the farina being broken down into its component parts and absorbed as such. The rationale of butter-flour mixture is essentially that of the thick cereal feeding—the carbohydrate is in the form of a polysaccharide plus that of a high fat diet.

Mitchell points out that the absorption of fat is better obtained with a high percentage of carbohydrate and he believes that where fat indigestion is present an attempt at increasing the fat tolerance should be made by gradually increasing the amount given. Carbohydrate may be made to take the place of fat provided a small amount of fat is used to supply the fat-soluble vitamin. In the thick cereal feeding the percentage of fat is low; in the butter-flour mixture the percentage is high but the fat is so modified that it is more readily digestible than otherwise.

## In Lighter Vein

### A Change of Face.

Roger, ordinarily quite a peaceable child, came home after a fight with his new neighbor.

"Why, Roggy, I'm ashamed of you!" Mother said sternly. "And I'm certainly surprised at that new boy's fighting; I thought he had the nicest face!"

"Well, he ain't now!" replied Roger, reminiscently.—New York Sun.

### Sanctuary.

"A shockin' coward my husband is. I was tellin' 'im off proper outside th' public library, when off 'e run inside an' stood near one o' them 'Silence' notices."—London Opinion.

### Tragedy in Australia.

Mr. Kangaroo: But, Mary, where's the child?  
Mrs. Kangaroo: Bless me, I've had my pocket picked.—Punch.

### Is There No Justice?

Junior came running into the room while his mother was in the midst of her mud facial. He took one long, unbelieving look and exclaimed:

"Gee whiz! An' you got the nerve to call me in to wash my face!"

### Homecoming.

The doctor told Alias Jones not to stay out late nights.

"You think the night air is bad for me, Doc?"  
"No," said the physician, "it isn't that. It's the excitement after getting home that hurts you."—New York Morning Telegraph.

### Travel Note.

The cabin of an ocean liner, says an insurance authority, is the safest place in the world, and a Pullman berth is next. Stay home if you must, but remember, you do it at your own risk.—Spokane Spokesman-Review.



## County Society Reports.

### ATLANTIC COUNTY.

Joseph H. Marcus, M.D., Reporter.

The stated monthly meeting of the Atlantic County Medical Society was held at the Hotel Chalfonte, March 12, at 8:30 p. m. The meeting was called to order by D. Ward Scanlan, President. The minutes of the previous meeting were read and approved.

Dr. W. Blair Stewart, Chairman of the Public Health and Welfare Committee, reported that the Radio Health Talks were being continued. Dr. Stewart recounted in brief the activities of the annual meeting of the American Congress of Internal Medicine, which was held at Detroit recently. This session embodied splendid clinics and highly instructive talks which were attended by Drs. W. Blair Stewart, Dr. Ward Scanlan and Clarence Andrews. Drs. Scanlan and Andrews were both honored by being elected to the American College of Physicians, Dr. Stewart already being a member of this organization.

Dr. W. P. Conaway, reporting for the Board of Censors, stated that Drs. R. A. Kilduffe and R. Williams were elected to membership to the County Medical Society. Applications for membership to the society were read; the applications being from Drs. Eugene Dalton and Hilton Read.

A letter was read by the secretary, received from the State Society, with reference to amendments to the State Constitution. It was moved that consideration of this matter be deferred to a later meeting because of the long program already prepared for this session.

The Scientific Program was instituted by Dr. Harvey B. Stone, of Johns Hopkins Medical School, his subject being, "Consideration of Some Features of Cancer of the Terminal Colon". (Dr. Stone's paper will be printed in full in an early issue of the Journal.)

The program was continued by Dr. I. S. Ravdin, of Philadelphia, his subject being, "The Problems of Surgical Jaundice." The author briefly and concisely described the physiology of the gall-bladder and liver and those parts of the anatomy intimately associated with these organs. He stressed the importance of constantly bearing in mind a clear conception of the functions of these organs in order to obtain the best possible results both in diagnosis and surgical procedures. He stated that many classifications of jaundice have been suggested, but the one he believes most satisfactory in the teaching of clinical surgery is that of McNee. This author divides jaundice into 3 groups: (1) Obstructive hepatic jaundice. (2) Toxic and infective hepatic jaundice. (3) Hemolytic jaundice.

In this paper we are concerning ourselves with the first 2 groups. It is true that it is not always possible to confine an individual case to one group, but in many instances this is possible.

How does the obstructed bile enter the circulation to be spread throughout the body and stain the tissue cells? Whipple and King, working on the 2 hypotheses previously reported, namely, that the bile entered the systemic circulation by way of the lymphatics or by way of the hepatic vascular capillaries, found that drainage of the thoracic duct in no way influenced the development of jaundice. They, therefore, concluded that the bile is absorbed by the hepatic vascular capillaries in obstructive jaundice.

Ogata was unable to find any relationship between the occurrence of jaundice and the presence of visible breaks in the walls of the bile capillaries. He, however, lays particular stress on the occurrence of early hepatic-cell necrosis after biliary obstruction. Eppinger also has called attention to these areas of so-called icterus necrosis and Carnot and Hernier have observed areas of such size as to call them "biliary infarcts". These areas of localized necrosis are only one of the pathologic lesions consequent upon bile duct obstruction. It is true that some authors believe that human bile is incapable of producing permanent hepatic cell injury.

Dr. Raydin pointed out the existence of some diversity of opinion as to whether cholangitis, or inflammation of the bile ducts, produces an obstructive ductal jaundice or whether the resulting icterus is direct result of damage to the hepatic cells. It is quite likely that here, as in the cases of typical stone obstruction, associated with infection, both factors may play an important part.

Rous and McMaster have called attention to the similarity between this pent up "white bile" and the pent up urinary secretion which results after urinary obstruction. The similarity would have been recognized long ago were it not for the complicating activities of a partly or wholly functioning gall-bladder. When the contents of the obstructed ducts have been altered through the action of a functioning gall-bladder the "hydrohepatosis" is concealed, but when this organ is functionless and the ducts are filled with a thin, white fluid there occurs a "manifest hydrohepatosis" and the similarity between this condition and hydronephrosis is more evident. It is quite likely that some patients dying within a short time after release of the ductal obstruction are suffering from a condition in a way analogous to the precipitation of uremia after the sudden withdrawal of urine from the urinary bladder in the retention of prostatic disease. The actual chemical changes may be at variance because of a differing function, but the underlying pathologic physiology is probably quite similar.

Dr. Ravdin has observed a second type of reaction in some of his cases. For 4 or 5 days after operation the patient has done well when there gradually develops an increasing stupor which may be preceded by excitement, followed or accompanied by evidences of circulatory failure and a renal shut-down.

The third type of catastrophe noted after common duct operations comes on much more insidiously. The patient is apparently doing "too well". Gradually the temperature becomes subnormal, increasing weakness is manifest and death occurs 3 to 6 weeks after operation from inanition. There is little doubt in our minds but that this condition is one of prolonged dehydration with deficient digestion and absorption and associated loss of pancreatic juice and of the inorganic elements of the bile.

In closing, Dr. Ravdin urged the plan of encouraging toxin elimination by the administration of fluids previous to operation, by proctoclysis, hypodermoclysis or intravenous introduction. On Surgical Division B, we attempt to introduce from 4000 to 6000 c.c. every 24 hours. There is no doubt but that it improves the clinical condition of the patient. Glucose in a 5% solution is given by bowel, since we know that patients with a sufficient amount of glycogen in the liver withstand general anesthesia much better than those without it. Also, 5 c.c. of a 10% solution of cal-

cium chloride is given intravenously daily before operation to decrease the bleeding and coagulation time. If there has been persistent vomiting an alkalosis may be present and ammonium chloride is administered by bowel.

Although local anesthesia may be considered it does not permit of sufficient relaxation for exploration. We use it in the very sick patients in whom only cholecystostomy is attempted. In all other cases local anesthetic plus ethylene is, in our opinion, the anesthesia of choice. Ether causes a further derangement of the liver parenchyma with a subsequent suppression in the amount of bile secreted and only adds to the load which the patient has to carry.

The question whether or not to explore the common duct will depend upon the condition of the patient. In some cases the calculus is removed and the duct drained, in others only the duct is drained and no search is made for stone. This more extensive procedure can await the time when the patient is better able to withstand an operation. Gradual decompression can be obtained by permitting intermittent drainage through the T-tubes or by utilizing an apparatus similar to that used in decompression of the urinary bladder.

The patient is given fluid postoperatively similar to that given pre-operatively. In the bad risk cases 500 to 1000 c.c. of 10% glucose are given intravenously every 24 hours, with sufficient insulin to assist in its utilization. In a very desperate case we recently used the continuous intravenous drip with remarkable results.

Morphin is given in very small amounts because it depresses liver function. Calcium chloride is administered intravenously to offset a calcium deficiency. We have given as much as 30 c.c. of a 10% solution in 24 hours. If there is any evidence of bleeding postoperatively, blood transfusion is resorted to. We have not found unmodified blood superior to citrated blood in this respect. Moist heat is applied over the liver area after the suggestion of Crile. Whether it is of value is doubtful.

The bad risk cases are usually those associated with infection and calculus. The mortality of the cases of obstruction from tumor being decidedly lower. All of the cases, however, demand the most meticulous attention and an understanding of the underlying pathologic physiology if we are to reduce the present high mortality.

The program was concluded by Doctor Elizabeth H. Ravdin, of the University of Pennsylvania, whose topic was "Modern Conceptions of Hepatic Function". In part the authoress pointed out that: The principle pigment of the bile is bilirubin and in a discussion of bile pigment, it is bilirubin that is meant. That hemoglobin is the only source of bilirubin Dr. Ravdin believes for several reasons.

(1) For many years it has been known that bile pigment is formed in blood extravasations in the tissues, as in bruises, or hematomas, and in sanguinous exudates in the pleural cavity. The pigment found in these cases has been called hematin, but Rich has recently shown that hematin and bilirubin react chemically in exactly the same way and that their oxidation and reduction products are identical.

(2) It has also been shown that an excess of hemoglobin in the circulation, whether from increased intravascular hemolysis, or from the experimental introduction of free hemoglobin, is followed by an increased formation of bilirubin.

Brown, Rous and McMaster have recently pre-

sented evidence which seems to prove the reabsorption of bilirubin from the intestine after its excretion in the bile. Whipple has never been willing to admit that bile products are reabsorbed but the former investigators, by estimating the 24 hour output of bilirubin and of urobilin in the bile of a dog with common duct drainage were able to show that feeding bilirubin increased both the bilirubin and urobilin output, though feeding urobilin increased only the urobilin output. An interesting and suggestive observation was made by them, that the hemoglobin of the animal fell when all the bile was drained through the tube for several days, but rose after bilirubin feeding, confirming the belief that bilirubin could be re-utilized in blood formation. This accords with and perhaps explains, Whipple's statement that liver was the best hematonic in chronically anemic experimental animals.

While there are many problems remaining to be solved and points to be clarified, the recent work is very promising and some of it, as the van den Bergh test, is of immediate clinical importance.

The above papers were discussed by Doctors W. J. Carrington, Samuel Stern, D. Ward Scanlan and other members of the society.

#### Atlantic City Hospital Staff.

Joseph H. Marcus, M.D., Secretary.

The stated monthly meeting of the Atlantic City Hospital Staff was held at the Hotel Breakers on February 19, 1926. The meeting was called to order at 8:30 p. m. by the president, Dr. Richard Bew. The minutes of the previous meeting were read and approved.

Dr. W. J. Carrington, reporting for the interne committee, stated that all appointments for the ensuing year have been filled, the applicants all being graduates of Class A Medical Colleges.

The president appointed a committee to revise the present Constitution and By-Laws. This committee consists of Drs. Theodore Senseman, chairman; W. J. Carrington, H. I. Silvers, D. B. Allman, Richard Bew and Joseph M. Marcus.

Dr. W. J. Carrington presented the following motion: "that the staff recommend to the Board of Governors the purchase of a specified amount of radium for use by the staff of the Atlantic City Hospital." This motion was duly seconded and a committee consisting of Drs. W. J. Carrington and W. C. Wescott was appointed. Dr. Shivers nominated Dr. Stanley McGeehan as clinical assistant in urology. Dr. McGeehan was invited to attend staff meetings pending this permanent appointment.

The Scientific Program was opened by Dr. E. C. Chew, who presented a statistical report comprising the admissions during his service extending from August to October, inclusive, 1925. Among the data presented were the following: Total number of cases 103, of which 72 were male and 31 females. The males averaged 7.5 days per patient, females 8.5 days per patient. Of the 72 males, 65 were white and 17 colored. Of the 31 females, 28 were white and 3 colored. Of the 103 combined cases, 70 typified acute conditions and 33 chronic illness.

The Scientific Program was continued by Dr. Clarence L. Andrews, with presentation of cases and discussion of those which terminated fatally.

#### Discussion of Cause of Death.

Case No. 4241—Mrs. L. J., white, female, age 53, housewife, was admitted to hospital in a moribund condition following gastric hemor-



rhage. She was in stupor and died in 3 hours, as hemorrhage could not be relieved.

Case No. 3786—Baby P. D., white, male, age 4 months, admitted to hospital in convulsions and collapse with high degree of marasmus. Everything done to revive the child, but it only lived 3 hours; no postmortem.

Case No. 4259—I. B., colored, male, age 57, was admitted to hospital in state of uremic coma and died in 55 minutes, before anything could be done. Postmortem showed chronic interstitial, nephritis with contracted sclerotic kidney; cause of death uremia.

Case No. 3168—W. C., white, male, age 31, was admitted to hospital with convulsions. Unable to state cause of illness, till catheterized, when specimen of urine showed so much albumin that it coagulated, and was loaded with all types of casts. An attempt was made to bleed him and at the same time replace the blood by a solution 10% glucose and 5% soda. Just about the time when he had been bled 350 c.c. a severe convulsion occurred and he died.

Case No. 3239—A. McD, white, female, age 47, was admitted to hospital in a very poor condition due to expectoration of great quantities of blood. Everything was used, even including horse serum, but she died in a few hours from hemorrhage of the lungs due to tuberculosis.

Case No. 4013—Baby A. S., white, male, 2 months, was admitted to hospital in a very emaciated condition, pulseless and unable to take food. Took small amounts of nourishment for 3 days but was in such poor condition that he died of inanition.

Case No. 4175—J. B., white, male, age 45, was admitted to hospital with a continuous cough which could not be allayed, rapid breathing and cyanosis. X-ray showed dilated heart, both ways, enlarged aortic arch and irregular areas of cloudiness in base of right lungs; diagnosis of pneumonia with ruptured bronchus. He became worse and had to be shackled to bed. He died in 3 days. Wassermann 4 plus.

Case No. 4296—Colored, male, age 40, was admitted to hospital unconscious and in very poor condition following right sided hemiplegia. He died in 24 hours without having regained consciousness. Wassermann positive; most probably gumma of brain.

Case No. 3155—W. H., colored, male, age 24, was admitted to hospital with pneumonia following infection of finger and right side of chest. Gradually grew worse and died in 3 days. Temperature went up to 105°; Wassermann negative.

Case No. 4053—Colored, male, age 50, was admitted to hospital with swollen abdomen, dilated heart and shortness of breath. In spite of treatment he gradually got worse and died in 10 days. Postmortem showed chronic interstitial splenitis, nephritis, pancreatitis and myocarditis.

Case No. 4028—C. P., colored, male, age 14, was admitted to hospital with typhoid fever. Ran a typical course for 8 days and then had a perforation. Temperature fell from 102.5° to 96°. Acute abdominal pain. Was operated upon by Dr. Allman and perforation closed. Got along very nicely for 8 days, and then began to complain of pain in his head, teeth became set, and he had strong clonic convulsions of whole body, at times preceded by right sided convulsion. Died of what was taken to be cerebral thrombosis as sequel of typhoid fever. Wassermann negative. No postmortem was done. Looking back, and in view of the locked jaws and convulsions following

a ruptured viscus, one wonders if it could not have been a tetanus infection complication.

Dr. Andrews made a plea for more autopsies and recommended that each interne should be required to perform or assist in a certain number of autopsies before his service is considered to be complete.

In discussing the reports of Doctors Chew and Andrews, Dr. David B. Allman expressed his appreciation of the unstinted coöperation, extended on his surgical service.

Dr. Harold Davidson also made a plea for more autopsies.

Dr. Robert A. Kilduffe, director of laboratories, directed attention to the blood picture found in typhoid; showing a definite blood picture, demonstrating the occurrence of intestinal perforation.

These cases were further discussed by Doctors Shivers, Barbash, Carrington, Bew and Kaighn.

Upon proper motion the meeting adjourned.

## ESSEX COUNTY.

### Academy of Medicine of Northern New Jersey.

J. Alfred Stahl, M.D., Reporter.

The anniversary meeting of the Academy of Medicine of Northern New Jersey was held Wednesday evening, March 17, 1926, in the auditorium of the Academy at Newark. Dr. Francis Carter Wood, Director of the Cancer Research Institution of Columbia University, was the speaker of the evening. The public, especially women, were invited to attend and did so in large numbers.

Dr. Wood maintained that the germ theory of the cause of cancer, advanced by a number of workers in this field, especially that of Dr. Gye and Mr. Bernard of London, has failed of confirmation. He believes that irritation is, up to the present time, the best explanation of the cause of cancer. There is nothing to indicate that cancer is at all contagious. If the people could be educated to go to their physicians for periodic examinations, especially when the slightest evidence of a growth appears, the cancer mortality could easily be cut in half.

### Section of Medicine and Pediatrics of the Academy of Medicine of Northern New Jersey, Tuesday, March 9, 1926.

M. J. Fine, M.D., Chairman.

The subject for the evening was "Medical and Surgical Aspect of the Gastro-Intestinal and Biliary Tract". The meeting was opened with a paper by Dr. George Witt, on "Peptic Ulcer from the Medical Aspect", and Dr. Francis R. Haussling discussed "Gastric Ulcer from the Surgical Standpoint". Dr. Maurice Asher discussed "Diagnosis and Treatment of Disorders of the Biliary Tract, with Special Attention to Biliary Drainage by the Lyon's Method". The surgical problem of colecystectomy versus colecystotomy was discussed by Dr. M. Danzls, who presented a series of over 200 cases personally operated on at the Beth Israel Hospital of Newark. Dr. D. A. Kraker discussed "Ulcerative Colitis".

In the absence of the chairman, Dr. M. J. Fine, due to death in family, the meeting was presided over by Dr. Asher Yaguda.

The Nominating Committee presented the names of Dr. Ambrose F. Dowd, as chairman, and Dr. C. MacArthur, as secretary.

Meeting adjourned at 11:45 o'clock.

### GLOUCESTER COUNTY.

Henry B. Diverty, M.D., Reporter.

Regular meeting of the Gloucester County Medical Society was held at the Woodbury Country Club, Thursday evening, March 19, at 9 p. m.

Present: Drs. Duffield, Fisler, Ashcraft, Sickels, Underwood, Wood, Lummis, Burkett, Ulmer, Buzby, Hollinshed, Stout, Campbell, Hunter, Richardson and Davis of Camden County. The President, Dr. Stout, was in the chair.

Paper on "Recent Advances in Obstetrics" was presented by Dr. P. Brooke Bland, of Philadelphia. (Dr. Bland's paper will be published in a later issue of the Journal.)

President Stout called upon each of the members present and a general discussion followed, closed by Dr. Bland answering a number of interesting questions upon the subject.

### HUDSON COUNTY.

M. I. Marshak, M.D., Reporter.

The Hudson County Medical Society held its March meeting at the Jersey City Hospital, on March 2, 1926, with Dr. J. F. Londrigan presiding.

The nominating committee, consisting of Drs. Larkey, Miner, Coughlin, Sweeney and Spence, was elected and, later in the evening, presented the following nominations for officers of the society to be elected at the Annual Meeting in May: President, Wm. Freile. Vice-President, S. R. Woodruff. Secretary, H. J. Perlberg. Treasurer, Wm. G. Doran. Reporter, M. I. Marshak. Censor, for 3 years, Hugo Alexander. Trustees, for 1 year, Donald Miner, Chas. V. Niemeyer, G. K. Dickinson, B. S. Pollak and John Nevin. Scientific Work, for 1 year, E. J. Luippold, A. E. Jaffin and Wm. W. Maver. Welfare, for 3 years, Jos. F. Londrigan, Louis C. Lange and H. F. Tidwell.

Membership, for 1 year, C. B. Kelley (chairman), B. Kooperman, W. N. Barbarito, R. L. Ballinger, David M. Marks, M. J. Weiss, Joseph Koppel, William Brooks, Wm. G. Doran, C. P. Opdyke, H. V. Broesser, William Eckert, J. M. Kolb, J. J. O'Connor, M. Frank, A. Justin, George F. Sullivan, D. B. Street, Louis Pyle and T. F. Coughlin.

Audit, for 3 years, J. M. Stein. Publication, for 3 years, G. Ginsberg, Paul Andrae, H. T. von Doesten and A. S. Schulman. Publicity, for 3 years, G. P. Curtis.

Dr. Benjamin reported for the Exchange Committee and submitted various plans. They recommended an exchange operated by some private concern, as being the cheapest and one which has given the greatest satisfaction in other communities. A motion was made, seconded and passed that the report be received, the committee's recommendation adopted and that the committee be empowered to go ahead with the project and select the proper person or persons to operate an exchange.

A communication from the Board of Trustees of the State Society, in regard to some changes in the constitution of the State Society, was read. This will be printed in the Bulletin and acted upon at a future meeting.

The committee appointed to look into the question of "boot-leg" milk as reported by Dr. Harris, Commissioner of Health of New York City, reported that they have organized but have not done any real work as yet. They stated that they were to have a conference with a representative of the New York Department of Health in a few days.

Dr. Londrigan reported that the state Welfare Committee has been active during the session of the Legislature. The Naturopath bill has been tabled. The Chiroprapist and Chiropractic bills were still in committee but they have assurances that both houses will oppose any legislation opposed by the State Medical Society.

Dr. F. S. Meara, formerly Professor of Therapeutics at Cornell University, gave a talk on "Obscure Fevers". He handled the subject in a rather odd but illustrative and instructive manner. He cited a case, took up the various diagnoses made, how they were disproved and the methods of procedure and reasoning in at last arriving at diagnosis. During the presentation he also made many side remarks and cited a number of cases to illustrate what he meant.

The case cited was that of a male, age 61, who had always been in robust health. He developed malaise, loss of strength and a slight febrile reaction. Five months later he had a marked rise in temperature to 102° F. The case looked like one of infection from a hidden focus. X-rays of the teeth showed many abscesses, whereupon the teeth were removed, but without any effect on the course of the disease. The blood picture showed, 3,600,000 reds with 55% hemoglobin and a normal white count. Blood was transfused, 1000 c.c., but at the end of a week the patient had another rise in temperature. The blood count at this time showed, 4,600,000 reds, 72% hemoglobin and a normal white count. About 2 weeks later he had another transfusion. The fever continued however, going up every second, third or fourth day. Cardiac insufficiency now developed with edema of the extremities and rales at both bases. A complement fixation test was positive for both streptococcus hemolyticus and streptococcus viridans. A vaccine was made of these organisms and given. The patient then went to the sea-coast for a while and gained weight and strength and lost his fever. He came back to work, and in a short time the fever returned, going up to 103° F. The vaccine was repeated and he was given a weekly transfusion from donors specially prepared with excess antibodies against the infection he was supposed to have. His reactions to these injections were so severe that they had to be discontinued. About 1 year after the onset of his illness a large gland suddenly developed above the clavicle. This brought up the possibility of Hodgkins disease, carcinoma, lymphatic leukemia, or an inflammatory adenitis. Hodgkin's was ruled out by the blood not showing any increase in blood platelets, eosinophiles or transitional cells. Malignancy was ruled out by the appearance of the gland on section, and leukemia by the lack of increase in the white cells and the predominance of polymorphonuclear cells. At this time the patient developed gastric symptoms and an x-ray series of the gastro-intestinal tract showed a large carcinoma of the lesser curvature of the stomach.

Foci of infection in a great majority of cases are above the neck, in the head sinuses, teeth and tonsils. Sinuses may be involved without symptoms drawing attention to that fact. Fibrosed mastoids with few air cells might harbor infection. The small contracted tonsils are the ones most likely to harbor hidden infection. In children, the ears should be carefully examined. If all are negative, a gastro-intestinal x-ray series should be done, even if no gastric symptoms are present. A urinary tract examination, including a careful prostatic examination is often essential.



Malignant endocarditis was thought of. It is possible to have such a disease without murmurs and with a negative blood culture. The chart looked very much like malaria of the estivo-autumnal type, but the spleen was not enlarged. A therapeutic test with quinin proved negative. Pernicious anemia was ruled out by the blood picture. Typhoid was next excluded by the persistent absence of the Widal reaction and inability to find the organisms in the blood or feces.

Influenza can do all sorts of things. It may simulate typhoid; the onset is the same; and there is a slow pulse, nose bleed, slight cough, leukopenia, enlarged spleen and eruptions that may be mistaken for "rose spots". *Bacillus coli* infection, especially in children, must be suspected. A therapeutic test with urotropin should clear this up.

Syphilis in the tertiary stage due to breakdown of gummata, especially in the liver, will produce an obscure fever which lasts for a long time.

Drs. von Deesten, Haskins, Jaffin, Street and Nelson took part in the discussion, which was closed by Dr. Meara.

#### Osler Clinical Society.

M. I. Marshak, M.D., Reporter.

The Osler Clinical Society met on February 17, 1926, at the Union League Club, with Dr. J. F. Londrigan presiding.

Dr. A. E. Jaffin presented a case of acquired pulmonary syphilis with autopsy findings, in an old woman who had a supposed pneumonia 6 weeks before admission to the hospital, and who was admitted with a diagnosis of unresolved pneumonia. Examination showed an emaciated old woman with marked dullness, diminished breathing and few râles at the right base. An empyema following unresolved pneumonia was suspected while thought was given to the possibility of a neoplasm. An attempt at a diagnostically induced pneumothorax was unsuccessful. The temperature ran an irregular up and down course. Sputum was negative for tubercle bacilli on 12 examinations and the Wassermann reaction was also negative. An x-ray plate showed a dense shadow at the right base with the rest of the lungs clear. Autopsy findings were a liver and spleen studded with yellow nodules, which looked in the gross like cancer. The right lung was difficult to remove because of adhesions. In the center of the scar tissue was a degenerated gumma, but spirochetes have not yet been demonstrated in this tissue.

Dr. Jaffin reported another case of combined tuberculosis and syphilis, in which the syphilitic lesion was cleared up under intensive specific treatment. The tuberculosis however continued to progress. He showed slides illustrating the case.

Drs. Dickinson, Bartone, Heilbrun, Marshak and Jaffin discussed these cases. The following thoughts were brought out: All obscure cases should have a therapeutic test for syphilis even if the Wassermann reaction is negative. In days before the Wassermann, all cases that seemed like tuberculosis, but were not typical, received mixed treatment with remarkable results at times.

In Tuberculosis Sanatoria, where a large number of negroes are housed, the Wassermann re-

action is positive in about 15 or 20% of the cases. It is a routine in these institutions to give active antisyphilitic treatment to all these cases and the results are surprisingly good.

Dr. A. J. Newman described a case of cervical rib and showed x-ray plates of the same. This condition occurred in a male and was unilateral. There was a tingling sensation in the little finger of the right hand and pain in the right shoulder, with progression until the finger and eventually the hand blanched and became exceedingly painful. Three months after operation on this rib the pain disappeared.

Dr. Donald Miner read the paper of the evening on "Infections of the Hand". He said that amputations were common before Knovel's work on this subject. Since then a hand should nearly always be restored to function by proper drainage. In felons it is an error to wait for fluctuation because the infection will break through and may involve the periosteum and bone. Phlegmons are best treated by a crucial incision wide enough to get beyond the areas of induration but not deep enough to open up uninvolved tendon sheaths and fascial spaces. Paronychia should be treated by making parallel incisions on both sides of the nail, cutting through and raising a flap. Wet dressings should be maintained. Severe lymphangitis, tendon sheath and fascial space infections, are hospital cases. He then went into the anatomy of the tendon sheaths and fascial spaces in some detail, illustrating his talk diagrammatically with charts. In tenosynovitis of the second, third and fourth fingers, the sheaths should be opened, not cutting across the crease. Occasionally these sheaths must be opened in the palm. In infections of the forearm incision should be made on both sides directly on the edge of the bones, and the incisions should be joined by passing the artery clamp through close to the bones. Midpalmer space infections are drained through one of the lumbrical spaces between the fourth and fifth fingers. They should be drained with rubber tissue wicks. The thenar space should be drained through an incision on the dorsum of the hand avoiding the artery to the index finger. In subaponeurotic space infections use the same incision on the dorsum of the hand as for hyperthenar space drainage.

Hot moist dressings of citrate salt solution are applied after incision. If a hot bath is used, it should not be for longer than the first 24 hours. Too long continued heat will produce round cell infiltrations and prolonged disability. Passive and active motion should be started as soon as the infection is controlled. Dry dressings should be applied at this time. Serums and vaccines are of little importance. It is not necessary in any case to incise near the palmer arches. This paper is a plea for conservatism in hand surgery and for preservation of function.

Drs. Blanchard, Friele, Dickinson, L. Franklin, Bartone, Brooke, Seigler, Perlberg, M. Shapiro and Londrigan took part in the discussion, which was closed by Dr. Miner. The methods of procedure before and since Knovel's work were compared. A plea was made for proper diagnosis before incision as well as for a big enough and wide enough incision. If one waits for fluctuation before incising, frequently one waits too long. General anesthesia should be used in all tenosynovitis, fascial space infections and lymphangitis and proper dissections made. Bad end results are but too common because of improper or delayed treatment.

### MERCER COUNTY.

A. Dunbar Hutchinson, M.D., Reporter.

The County Society met in the Carteret Club on March 10, Dr. Comfort, the President, in the chair.

Dr. Louis H. Clerf, of Philadelphia, was introduced and gave a very interesting discourse on the subject of "Bronchoscopic and Esophagoscopic Problems", illustrated with lantern slides and moving pictures.

Dr. Clerf made a very earnest plea for the support of the Medical Profession for Senate Bill 2320, which provides for the proper labeling of all "lye" preparations on sale. The society went on record as favoring this Bill, and the Secretary was instructed to so inform our Representatives in the Senate and Congress.

Dr. W. M. Stratton was elected to membership.

The applications of Drs. Ethel M. Powis and Howard Wiesler were read and referred to committee.

Following reading of the communication from Dr. James Hunter, Jr., relative to construction of the Board of Trustees of the State Society, a committee, composed of Drs. Comfort, Costill, Sica and North, was appointed to study this very important subject and report at the next meeting.

About 50 members enjoyed the luncheon and social hour which followed adjournment.

### MORRIS COUNTY.

Marcus A. Curry, M.D., Reporter.

The regular quarterly meeting of the Morris County Medical Society was held in Dover, at the Mansion House, on the evening of Tuesday, March 9, with President Glazebrook presiding over a goodly gathering of about 50 members and guests; among the latter being Dr. Henry O. Reik, Editor of the Journal, and Drs. Pollock, Smith and Gambill of the staff of the State Hospital at Greystone Park.

This meeting had been anticipated with uncommon interest because of the touch of intimacy lent to it by its stellar attraction, a Symposium by members "On Preclinical Signs and Symptoms", putting the contributing members on their mettle and making obvious just what they can do themselves along scientific lines when they set themselves to the task.

Routine business included the election to membership of Dr. J. F. Johnson, of Chatham, and of Dr. Philip C. Washburn, of the staff of the State Hospital at Greystone Park, on transfer from the Cape May County Society. There also was one proposal for membership which was duly referred to the credentials committee.

A Nominating Committee was unanimously elected to prepare and submit at the June meeting their recommendations of officers for next year, to be voted on at the annual meeting in September; the personnel of the nominating committee being Drs. Mial, Costello and Matthews.

Two amendments to the By-Laws were unanimously adopted: (1) Making the annual dues of members \$15. (2) Rescinding an amendment which provided for the choice of annual delegates to the State Society in alphabetic rotation and providing that they be elected in future by nomination and ballot as prior to the adoption of the rescinded amendment.

An invitation of the Board of Managers of Shonghum Sanatorium (Morris County Tuberculosis Hospital), transmitted by Miss Katherine E. Dandley, secretary, was accepted, to hold the June meeting of the society at that institution. The speaker of the day is to be Dr. Linsley Williams.

An acknowledgement from Mrs. Mary E. Bebout, of a resolution concerning her departed husband, adopted at the December meeting of the society and transmitted to her by Secretary Lathrope, was read, expressing sincere and touching appreciation of the action of the society and paying a rare tribute to the members and to medical men in general.

Treasurer Reed's report indicated the usual healthful financial condition of the society, which has become a condition to be taken for granted; a tribute to the winning zeal of our affable and efficient Treasurer.

Dr. Ackerman, of the Committee on Group Life Insurance, reported the results of investigation into the subject and, permission being granted, an insurance man was introduced and ran over the proposition hurriedly in the short time allotted to him, describing a "Mass Policy" that could be issued to the society, under which subscribing members would hold a certificate for \$5000 of life insurance at an annual premium of \$85. without medical examination. The matter was referred back to the committee with a request to present the proposition in concrete form at the June meeting.

Reports of the proceedings of the various meetings of the Executive Committee brought forth much material of interest and indicated a great deal of work accomplished well by that group of executives.

The establishment of closer working relations, along well defined professional lines, with the Visiting Nurses' Association were indicated by recommendations laid before the society and which were unanimously approved:

(1) Ways and means of annual health examinations of nurses doing work in the county; each nurse to present herself to a physician to be named each year in the various localities of the County Society.

(2) Approval of a request for a "word of moral support" to a schedule of fees to be charged by visiting nurses, to be embodied in a letter for publication by the Visiting Nurses' Association in the local press, being submitted by Ruth Cheney Streeter, President of the V. N. A. of Morristown, as follows:

(a) To patients who could have employed a private nurse if one were available, in Morristown \$2, with \$1 additional for out of town.

(b) To patients who wish to pay cost, \$1.10, with .25 additional out of town.

(c) To patients who cannot pay full cost—any proportion thereof, or service free.

(3) The following "Standing Orders for Nurses" were approved, to be used on first visit when no physician has been called and when no orders have been given:

**For All New Patients**—Cleansing bath, T.P.R. Instruction on hygiene of sick-room with special emphasis on ventilation, cleanliness and diet suited to patient's conditions and needs.

**For Patient with Fever, Undiagnosed**—Liquid diet. Low S. S. enema when no abdominal pain or



tenderness. Sponge for temp. Isolate if any sign of communicable disease.

**For Infants with Fever, Diarrhea or Convulsion**—Normal salt solution colonic irrigation, P. R. N. Dist. boiled water. For Convulsion—Hot mustard bath (1 tablespoonful mustard to 1 gallon water) for 5 minutes. Cold cloths to head.

**Burns**—Remove clothing unless adherent to skin. Apply warm normal salt solution compresses. Remove patient to hospital if severe and physician cannot be reached.

**Minor Dressings**—Cuts, Bruises, Infected, Fingers, Scratches: Cleanse with hot boric or saline and apply wet dressing. If the patient has had dressing done by physician do not remove without order from physician.

**Discharging Ears**—Cleanse outer ear with warm boric solution. Do not irrigate without an order. Emphasize need of medical attention.

**Sore Throat**—Liquid diet. Isolate if possible until physician sees patient.

**Symptoms of Respiratory Disease**—General care: Advise good ventilation. Teach isolation and care of nasal and mouth discharge. Avoid exposure to cold. Liquid diet. Low S. S. enema P. R. N.

**For Infectious Diseases**—Isolate and same treatment as for respiratory cases.

**Maternity Cases**—For mother: Antepartum—Cleansing bath. Local cleansing with soap and water followed by lysol. Low S. S. enema S. O. S. Postpartum—Cleansing bath. Local cleansing with lysol solution abdominal and breast bindings, P. R. N. Low S. S. enema P. R. N. For the baby—Daily bath. Cord dressing changed P. R. N. Cleanse eyes and mouth with boiled water or boric solution. Cleanse skin around umbilicus with alcohol and apply boric powder. Advise 3 hr. feeding unless otherwise ordered. Soap suppository P. R. N.

Secretary Lathrope explained that the Executive Committee felt that these orders should be submitted to the society for approval and then the nurses could submit them for final approval to the physicians in their different districts.

Reporting for the Executive Committee, Secretary Lathrope read a communication from Dr. Hunter, Secretary of the Board of Trustees of the State Society, and explained fully and lucidly the sense of the Executive Committee on the present method of electing trustees; also submitting the proposals for a change in the procedure as contained in Secretary Hunter's communication, known as the "Quigley Plan", the "Eagleton Plan" and the "Morrison Plan;" stating that the Executive Committee had considered these proposals carefully and setting forth the reasons why the committee did not feel disposed to recommend any of the plans submitted; that the privilege of submitting another plan had been availed of at a meeting of the Executive Committee and a plan proposed by Dr. Curry to be submitted to the Society.

Taking up in order the proposals in Secretary Hunter's letter, the Society took the following unanimous action:

(1) That the Society does wish to see a change in the construction of the Board of Trustees and the manner of their election or appointment.

(2) That it is not satisfied with either the "Quigley Plan", the "Eagleton Plan" or the "Morrison Plan".

(3) That it wishes to submit a plan to be

known as the "Morris County Plan", as proposed by Dr. Curry, which is as follows:

"That the Board of Trustees of the State Society shall consist of 28 members; 7 to be members ex-officio, the President, 3 Vice-Presidents, Treasurer and the Corresponding and Recording Secretaries; 21 members to be chosen, one from each county society in the state; the 21 counties to be divided into groups alphabetically, A, B and C; the first group to be elected for 3 years, the second group for 2 years and the third group for 1 year; after that the representatives from each county to serve for 3 years.

The business session being over, the meeting proceeded with the scientific part of the program, the "Symposium on Preclinical Signs and Symptoms". President Glazebrook announced that 12 minutes would be allotted for the reading of each paper, with a warning at the end of 10 minutes of 2 minutes within which to close.

Papers on the following subjects were read by the physicians indicated:

1. Preclinical Stage of Cardiovascular Disease, Dr. Larson.
2. Fatigue, Dr. Emory.
3. Preclinical Signs of Gastro-Intestinal Disease, Dr. Peck.
4. Preclinical Signs of Disease of Genito-Urinary Tract, Dr. Thomas.
5. Preclinical Evidences in Gynecology, Dr. Frost.
6. Early Evidence of Mental and Nervous Disorders, Dr. McMurray.

The papers were extremely well presented by their authors and an unbroken sequence of great interest was maintained, with spontaneous applause of approval following each presentation. (The papers are to be published in the May Journal.)

Dr. Henry O. Reik, editor of the Journal, being called upon to open the discussion of these papers, assumed his task in a happy and interesting way during which he paid a high tribute to the success of the meeting by saying that in the year and a half he has been attending meetings in New Jersey this was, by long odds, the best county society meeting he had ever had the privilege of attending. Others taking up the discussion included Drs. Rubin, Glazebrook and Lathrope.

President Glazebrook summed up the manifest feeling and sentiment kindled by the incidents of the meeting in the following closing contribution: "It must be a source of a great deal of satisfaction to the society and to those gentlemen who have read these papers tonight; and certainly they could have had no greater reward than the compliment that has been paid them, and through them to the society, by Dr. Reik who has said that this is the best County Society meeting he has attended in a year and a half; I feel that must bring great satisfaction to every member of the society. As President of the society, I want to congratulate those men who have presented this series of papers and I can heartily agree with Dr. Reik in saying that I think this is the best Morris County Medical Society meeting we have ever had. I want also to take this opportunity to express my appreciation of the hearty coöperation and the spirit which these men have shown in accepting their appointments. I left the usual custom of asking for

volunteers and tried the experiment of assigning these papers and not in one case did the man whom I asked refuse. I think this indicates a splendid spirit. I feel very sure that you all agree that this meeting, which has been our own, a meeting in which scientific presentations have been made by members of the society, has been very much worth while."

A social session was entered into during which appetizing refreshments were served, the enjoyment of which was enhanced by a nice expression of appreciation on the part of ex-Secretary and present Historian Kice, of an arm chair of artistic design and comfortable proportions, according to his own description, which the members had given to Dr. Kice as a Christmas present. The interest and enthusiasm engendered by the numerous incidents of the meeting obviously ran through the social session, which augurs well for the promotion of the welfare of the society from every angle.

#### PASSAIC COUNTY.

Donald B. Low, M.D., Reporter.

##### February Meeting.

The February meeting of the Passaic County Medical Society was held at the Health Center Building, Paterson, on Thursday evening, February 11, with 30 members and 2 guests present. In the absence of the President, the First Vice-President, Dr. O. R. Hagen, presided.

On account of the prevailing weather, the principal speaker, Dr. Glafke, of New York, was unable to be with us.

Dr. William Spikers, of Paterson, presented a very interesting case of "Pedicle Skin Graft of the Hand following a Severe Mangle Burn".

Dr. L. G. Shapiro, of Paterson, presented a case of "Cardiospasm", and a case of "Angioneurotic Edema of the Brain following an Injection of Scarlet Fever Antitoxin".

Dr. Elias Marsh, of Paterson, presented a case of "Foreign Body in the Eye" with resulting enucleation due to destruction of that organ by infection.

A letter was read by the Secretary opposing the "Chiropractic" and "Naturopathic" Bills now before the Assembly. A motion was made to endorse the sentiments of the letter and the Passaic County Medical Society go on record as opposing these bills, No. 71 and No. 161, which no doubt all medical men have read. Dr. McBride was present and said that the State Society Welfare Committee opposed these bills likewise and also suggested that a special committee be appointed to make personal visits to the Assemblymen and express such objections to them.

Dr. Marsh made an announcement that on Wednesday, February 17, 1926, there would be a meeting of the Medical Reserve Corps at the Paterson Eye and Ear Infirmary. He invited the members of the society to be present.

##### March Meeting.

The March meeting of the Passaic County Society was held at Health Center Building, Paterson, on March 11. Thirty members and one guest were present, Dr. Charles R. Mitchell presided.

Dr. W. H. Glafke, of New York City, read a

paper on "Colitis". He brought before the society cases in which the common complaints were gas bloating, belching and constipation, of which so many patients complain, and cases in which the diagnosis of gall-bladder disease, chronic appendicitis, etc., are made.

He first took up the physiology of the intestine from a standpoint of intestinal tonus, saying that the tone was greatest in the ascending colon and duodenum, lowest in the ileum and rectum. The pathology of common colitis, that is not considering specific colitis, such as tuberculous or leucitic, was then considered. Under pathology 3 types were explained, namely, the phytic or cathartic colon, the food irritated colon and the nervous colon.

In taking up the treatment, Dr. Glafke said no irritating cathartics should be given, but lubricants and bolus such as mineral oil and agar can be given; quiet the large bowel by means of non-laxative absorbable foodstuffs which will be absorbed in the small intestine. He then gave a list of laxative and nonlaxative foods. The non-laxative foods were: eggs, milk, cream, cereals such as rice, cream of wheat and farina, dry toast, soups, with the exception of tomato soup, macaroni, chicken, tea, coffee, cocoa, custards, puddings and ice cream. The laxative foods were: coarse bread, coarse cereals, spinach, cauliflower, string beans, cooked fruits, such as pears and peaches, raw fruits, buttermilk and sweets.

We should first put the patient on a nonlaxative diet even to the point of constipation to quiet the bowel. It may even be necessary to use a diarrhetic mixture and as the patient becomes more comfortable gradually add the laxative foods until a normal stool is found. Rest in bed is an important factor when possible, as is also heat to the abdomen. The prognosis is good in most cases.

The paper was discussed by Drs. MacAlister, Marsh, Shapiro and Cogan, after which Dr. Glafke answered several questions.

The matter of health examinations was taken up and a committee was appointed by the chair to investigate this matter.

## Book Review.

*All books received will be mentioned by title with the names of their authors, publishers, etc., and this will be considered by the committee as sufficient acknowledgment to the publishers. Selections will be made for review as the merits of the books or the interests of our subscribers may warrant.*

**International Clinics.**—Volume No. 1. 36th Series. 309 pages. Published by J. B. Lippincott Co., Philadelphia, Pa.

This volume of the famous old quarterly contains its usual quota of admirable articles. The increasing tendency to the use of psycho-therapy is considered in an interesting paper on the development of "Psychiatric Research", by Professor E. Kraepelin of Munich, Germany, and under Electro Therapy, there are several papers which discuss the mooted question as to the benefit or damage offered to the blood by radio active agents, a very important subject in view of the apparent increase in the number of cases of pernicious anemia being reported.

All of the articles presented are concise and so adapted to the needs of the busy practitioner.



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## SYMPOSIUM ON PRECLINICAL SIGNS OF DISEASE.

In developing the campaign for county society discussions of "Periodic Health Examinations" various methods for presenting the subject have been considered. At the January meeting of the Union County Society, for instance, a clinical demonstration of the method of making a physical examination was staged, and this resulted in an interesting discussion of the technic to be employed. The advantage of such methods of bringing the problem to the earnest consideration of all physicians was well demonstrated, and it is possible that we may in time secure a moving picture film of a complete physical health examination for presentation at medical society gatherings.

The Morris County Society responded to the request that they devote a session to consideration of this general subject by proposing to arrange a special symposium on the early signs and symptoms indicative of commencing disease. Through the wisdom and activity of President Glazebrook and Secretary Lathrope, six members of the local organization were selected and induced to accept assignments for the writing of papers upon different phases of the subject. The result was a most interesting and instructive meeting, and we are pleased to publish this group of papers for the benefit of all members of the profession of this state and as an example of what any of our county societies may do through encouragement of their local talent.—*Ed.*

### FATIGUE AS A PRECLINICAL SYMPTOM OF DISEASE.

GEORGE B. EMORY, M.D.,  
Morristown, N. J.

The text books define fatigue as a more or less complete loss of muscle irritability and contractility brought on by functional activity. It is a phenomenon experienced to a greater or less degree by all of us. The first theory as to the cause of fatigue was advanced by the German physiologist Ranke about 50 years ago. He expressed the belief that, as a result of the chemical changes occurring in the muscle during contraction,

certain substances were formed which depressed or inhibited the power of contraction. These substances were sarcolactic acid, carbon dioxide, and acid phosphates. Another theory advanced by Weichart about 20 years ago is that fatigue is due to a specific fatigue toxin, analogous to bacterial toxins, and not to lactic and other acids, resulting from muscle cell metabolism. Dr. Fenton B. Turck, in a paper published in 1922, maintains the same theory of a fatigue toxin. He claims this toxin to be the result of autolysis, the tissue ferments digesting the exhausted or damaged cells. Ochsner, in his book on Chronic Fatigue Intoxication, also mentions a toxin as a possible cause of

chronic fatigue. On the other hand, Lee and Aronovitch, in 1924, in their experiments on the nature of fatigue, failed to confirm the theory of a fatigue toxin.

Fatigue is described as being physiologic or pathologic, with no sharp dividing line between the two types.

**Physiologic Fatigue**, also called normal fatigue, is influenced by several factors:

(1) The supply of carbohydrates to the tissues.

(2) Supply of oxygen to the tissues. According to Hill, oxygen combines with lactic acid reconvertng a portion of it to muscle carbohydrate.

(3) Poisoning of the muscles and tissues by sarcolactic and other acids, due to breaking down of the glycogen and to a lesser extent of the proteins and fats of the tissue cells.

(4) The extent to which these acid bodies accumulate in the blood and the rapidity with which they are excreted by the kidneys, lungs, and skin.

(5) There is also a psychic as well as a physical element in fatigue. Voluntary muscles are more quickly fatigued than involuntary muscles. Enjoyable exercise causes less fatigue than monotonous exercise. The losers in an athletic contest are always more fatigued than the winners.

This physiologic, or so-called normal, fatigue is temporary in character, is not a symptom of disease, and requires no further consideration.

**Pathologic Fatigue**, also called cumulative fatigue and chronic fatigue intoxication, is, on the other hand, of very great importance.

It is present in nearly all disease conditions, either acute or chronic, and may possibly be in itself a distinct disease entity. The nature of pathologic fatigue differs somewhat from that of physiologic fatigue. It may result from repeated and long continued attacks of physiologic fatigue, an acid intoxication due to inability of the body to excrete the poisons as rapidly as they are formed. There is also the doubtful possibility of chronic fatigue being due to a distinct fatigue toxin. It also occurs in brain workers of sedentary habits in whom it

could not be the result of muscle cell metabolism with its formation of waste acid products. Sir Clifford Allbutt describes this type of fatigue as "atonic fatigue", due to exhaustion of the higher centers in the brain. In fatigue the cells of the brain show changes, namely a shrinking of the cell and loss of Nissl bodies. It has been generally believed that nerve fibers do not show fatigue. If a nerve trunk be blocked at its entrance into a muscle and the nerve trunk then stimulated for a long time, it will be found on removal of the block that the muscle response is normal to further nerve stimulation. This experiment shows that the nerve trunk is apparently not subject to fatigue. But Tashiro, in 1913, and Parker (*Jour. Gen. Physiol.*, Nov., 1925), in 1925, have demonstrated that, although the medulated nerve fiber is much more resistant to fatigue than the muscle cell, the nerve fiber does show fatigue; but it loses its irritability when deprived of oxygen and during functional activity it gives off minute quantities of carbon dioxide. It is possible that certain symptoms may be due to nerve fatigue and it has been suggested that neurasthenia may become a well established clinical entity with nerve fatigue as its cause.

The fatigue, which accompanies acute infectious diseases, is a prominent early symptom but is not of practical importance. The early appearance of objective symptoms establishes the diagnosis and overshadows the symptom of fatigue.

For us the great importance of fatigue is (1) in preventive medicine, and (2) as an early and sometimes solitary symptom in chronic disorders.

**In Preventive Medicine.** The prevention of chronic fatigue is a most important health measure. Not only for industrial workers, but also for brain workers, for the growing child, and for each and every individual. Dr. Borden S. Veeder (*J. A. M. A.*, Sept. 3, 1921) among others, has written on the part played by fatigue in the physical development of the growing child. The average child of today leads a complex life, too little rest and too much mental stimu-



lation. This results in overfatigue, malnutrition and underweight. These children suffer in their mental and physical development. He stresses the importance of an adequate amount of rest in the growing child to prevent overfatigue.

Darlington, in a paper on "Physiologic Principles Applied to Industry" (*Inter. Clinics* 26:146), gives the following as causes of chronic or cumulative fatigue:

(1) Bad ventilation.

(2) Any condition causing diminished oxygen supply to the tissues, such as high altitude, anemia, etc.

(3) Any condition interfering with the general circulation, such as heart disease.

(4) Any condition causing diminished lung capacity, as tight clothing, or disease of the lungs, such as pulmonary tuberculosis.

(5) Long continued overfatigue of the muscles causing accumulation of poisonous waste products in muscles and blood.

(6) Intestinal fermentation (indol).

The products of fatigue, whatever the source, pass into the blood and affect all parts of the body including the nervous system. In industry, the prevention of overfatigue in the worker, is of great importance; not only from the standpoint of the health of the individual, but in maintaining his efficiency. Enlightened employers recognize the fact that a machine worker, if allowed frequent short intervals of rest during the day, will increase his output and be less fatigued at the end. Spaeth (*Jour. Indus. Hygiene*, Vol. 1, No. 8, 1920) also stresses the importance of preventing fatigue in industrial workers. Normal or physiologic fatigue is harmless but cumulative fatigue is dangerous and the former may merge insensibly in to the latter and there is no physiologic test which will show when the danger line is passed. He considers that industrial psychoneuroses and other serious nervous disorders are the result of chronic fatigue.

**(2) Fatigue as an Early Symptom.** Considered as an early symptom in chronic disorders fatigue is of equally great importance. People do not come to us with fatigue as their only complaint unless it is severe in

character or of long duration. When they do come to us with this symptom it deserves careful investigation, for it is always due to some pathologic condition and often to a condition of serious nature. It has been, and I think is still, generally believed that fatigue plays an important part in the causation of disease. Sir James Paget is quoted as saying: "You will find that fatigue has a larger share in the promotion or transmission of disease than any other single causal condition you can name". When experimental evidence was sought to confirm this generally held conviction it was not found. Oppenheimer and Spaeth, in 1922, at Johns Hopkins University, induced fatigue in rats and guinea pigs by enforced muscular exercise and then injected them with lethal doses of pneumococci. In both species of animals it was found that the fatigued animals were more resistant to pneumococcus infection than non-fatigued animals. Possibly these animals were only suffering from normal or physiologic fatigue and perhaps this type of fatigue is not a causative factor in disease. But chronic or pathologic fatigue is a different matter and I think most of us feel that it is a very important factor in disease causation. Ochsner, in his book on chronic fatigue intoxication (1923), believes chronic fatigue to be responsible for many disease conditions involving most of the organs and systems of the body. He considers paralysis agitans to be a terminal condition of chronic fatigue intoxication.

Fatigue is an early and often the only subjective symptom in focal infections. Abscessed tooth roots or chronically infected tonsils may cause marked fatigue and no other subjective symptom, and this symptom will clear up promptly on removal of the infected focus. It is an important early symptom in such chronic disorders as pulmonary tuberculosis, hyperthyroidism, cardiovascular disease, renal disease, depressed mental states, diabetes, etc. There is no need of enumerating all the conditions in which fatigue is an early and prominent symptom, but I do wish to emphasize the importance of fatigue as an early symptom in many important diseases. We hear this complaint

from patients frequently, so frequently in fact that we do not always give it the attention it deserves. A patient who comes to us complaining of chronic fatigue has some underlying pathologic condition. It is an indication of an abnormal state, and possibly a serious one. The patient comes to us for relief and we are not doing our duty if we only prescribe a tonic. Chronic fatigue should never be lightly regarded, its cause should be sought for and determined whenever possible.

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### PRECLINICAL STAGE OF CARDIOVASCULAR DISEASE.

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Within the past few decades the mortality from tuberculosis has fallen about 50%. During the same period the mortality from disease of the circulatory system has risen about 50%. Diseases of the circulatory system have displaced tuberculosis and now occupy first place in the list of the causes of death. Figures for morbidity and the financial distress occasioned by morbidity have probably changed in a like manner. This means that diseases of the circulatory system constitute an increasingly grave problem.

Tuberculosis and diseases of the circulatory system have certain things in common. Both attack, cripple and kill at all ages. In both there seems to be an hereditary predisposition and an environmental influence. In both there is a tendency to relapse if the patient is not under proper supervision for a sufficient length of time. Both tend to become chronic. With both there is the economic situation that goes with chronic disease and the attendant loss of earning power. Both are to a degree preventable, arrestable or curable. In both an early diagnosis is of great importance.

The progress in prevention and treatment

of tuberculosis has to no small degree been due to organized effort. For years there has been carried on a campaign against that disease. The success of that campaign has fully repaid all who took part in it. A great portion of the actual work has fallen upon the practicing physician.

Diseases of the circulatory system which present many similar problems must be combated by similar organized effort. This campaign will in no slight degree be like the one against tuberculosis. There is reason to believe it will meet with similar success. The antituberculosis campaign has taken a couple of decades to gain its present victories. The new campaign may not take as long to win similar ones. At all events, a great portion of the work in the new undertaking will again fall upon the practicing physician.

The detection of the preclinical or incipient tubercular case has been an important work in the fight against tuberculosis. The discovery of the preclinical or early circulatory case is of equal importance in the new effort. For this reason it is worth while to consider the genesis of circulatory disease and its early signs.

A discussion of the genesis of all the affections of the circulatory system is obviously impossible here. Although all too numerous, such conditions as congenital heart defects, new growths of the heart, traumatic heart lesions, thyroid hearts, bacterial endocarditis due to known organisms, intoxications with certain chemical poisons, and various other conditions are numerically relative unimportant. So too are certain unusual diseases of the blood and vessels.

Probably 75% of all those suffering from diseases of the circulatory system fall into one or other of the following 4 great groups:

(1) We have the so-called rheumatic group accompanying or following tonsillitis, chorea or acute rheumatic fever. This group belongs to the early decades of life. It includes probably 90% of youthful circulatory cases. Initial attacks are rare after 35 years of age. This form of circulatory disease is undoubtedly infectious. It is perhaps communicable. It may be preventable,



arrestable or curable. Every young rheumatic is a potential, or even probable, circulatory case.

(2) Syphilis frequently attacks the circulatory system. The heart and aorta seem especially vulnerable. It makes itself manifest there often toward the end of the second decade following the initial lesion. This makes it chemically a disease of middle life. It is infectious, communicable, preventable and curable. Every luetic is a potential circulatory case.

(3) Hypertensive circulatory disease is common in middle life. For a period of time preceding chemical signs of circulatory insufficiency one of two conditions may be evident, chronic nephritis or so-called essential hypertension. The first of these is often due to infection somewhere, sometime. If so it may be preventable. The cause of the second, we know nothing of. The circulatory failure resulting therefrom in a great percentage of these cases can, however, be postponed if not prevented. The patient with chronic hypertension from whatever cause is a potential case of circulatory failure.

(4) Arteriosclerosis is a common disease of the circulatory system. Its most usual sites are the extremities, the heart, the brain and the kidneys. It is a disease of late life. In it, hypertension may be but moderate. In many cases it is absent—a fact worth remembering. Its victims have arteries and hearts that are old. They may be old because of years of work or perhaps because the years have exposed them to frequent or prolonged insult from intoxications or infections. The primary site of these may be or may have been in any part of the body.

All who carry or have carried repeated or prolonged infections—especially the elderly—are potential circulatory cases with arteriosclerosis, heart failure, apoplexy and nephritis threatening them. Surely prevention is a possibility in some of these cases.

All tuberculosis is due to infection, and, after considering these groups which contribute the greater portion of our circulatory

disease, one sees that most circulatory disease is due to infection.

Keeping in mind the genesis of these larger groups of circulatory disease, it will be well to consider some of the early signs presented by patients suffering from or about to suffer from circulatory disease. In searching for and weighing these signs several things should be borne in mind. The circulatory system normally has a great reserve and the earliest signs of circulatory failure are usually signs of impairment of that reserve. In the young, objective signs frequently precede subjective signs; in the elderly the opposite is true. Any complaint of a patient may be due to an overwrought nervous system or to disease or disorder elsewhere than in the circulatory apparatus. A cardiac irregularity or murmur may be an expression of a perfectly normal heart. The bitterness of a complaint or the intensity of a sign is not always proportional to the gravity of a lesion. The most extensive degeneration and most profound exhaustion of the circulatory organs may be present and yet fail to give appreciable signs. It is hazardous to attach great importance to any one sign unaccompanied by other phenomena.

Subjective signs are those of which the patient complains or to which he may confess when questioned. Circulatory patients frequently suffer from one or more of the following discomforts—at first usually during or after exercise or eating:

*Fatigue*, which may be either muscular or mental and is frequently of a very marked degree. It is first induced by activity which formerly failed to induce it. One sort of activity may produce the other form of fatigue. It may appear not during or immediately after, but hours—sometimes a whole day—after the activity causing it. This fatigue may perhaps be explained by anemia, asphyxia, stasis, chemical retention or vascular changes in the protesting members.

*Substernal distress*, heaviness or pressure behind the sternum or a sensation of choking coming at first after exercise or eating is a common symptom. Walking in a cold

wind often gives the patient his first taste of this discomfort.

*Cough*, without obvious good cause coming during or after exercise or eating may be an early symptom. Pulmonary and bronchial congestion with irritation, excessive secretion and at times a mild added infection—or a dilated vessel making pressure on an adjacent nerve may be the immediate cause of this symptom.

*Palpitation* is complained of more often by patients without demonstrable circulatory disease than by those with. When induced by exercise it may be the earliest sign of circulatory exhaustion or degeneration. It is frequently accompanied by tachycardia or an irregularity—usually premature contractions.

*Dyspnea* induced by what formerly did not cause it is a prime complaint. Exercise or a full stomach are usual causes. The mechanism of this symptom may have to do with engorgement of the pulmonary system, increased viscosity of the blood and its effect on the respiratory center. Any slight increase in load easily upsets a circulatory system where the reserve is impaired and dyspnea readily results.

*Nocturnal attacks* are common. They may come upon the patient abed, often asleep. They may superficially resemble and are at times mistaken for bronchial asthma. They are precipitated by different causes. The recumbent attitude may mechanically interfere with free thoracic movement, relaxed laryngeal muscles may permit a narrowing of the orifice, and a less sensitive respiratory center may permit a slight asphyxia to develop. Dyspnea, often of a very violent type, quickly results. When accompanied by cough and a frothy sputum such attacks may have great significance.

*Pain* may occur with any type of circulatory disease and is in some cases an early symptom. Popular belief is that cardiac pain is agonizing and unbearable. So it may be in angina pectoris or in coronary thrombosis, but even in these not always. Pain of such severity is rare, while minor pains are not uncommon in circulatory disease. So mild may pain be as to require special ques-

tioning to elicit knowledge of it. Most significant pains are induced by exercise or eating. Many are precordial or substernal in distribution. Some radiate. Others do not. Many are accompanied by areas of superficial hyperesthesia. The mechanism of cardiac pain is such a subject of debate as to preclude discussion here.

*Abdominal* symptoms—anorexia, epigastric fullness and abdominal distention are common enough and may be early signs of circulatory disease. Vascular changes and congestion in the various abdominal organs explain these symptoms.

The objective signs of circulatory disease are many and varied—easy to discover and often difficult to interpret.

Inspection may suggest to the examiner the presence of one or more of the subjective signs already mentioned. A peculiar pallor, not that of anemia, is to be seen in many cases. A slight cyanosis in some cases appears early—early in a clinical if not in a pathologic sense. Unequal pupils may be an early sign of grave pathology.

Tortuous, thickened or hardened arteries may be discovered in the extremities or retinas. Of these cases, 75% have similar changes in the coronary arteries. The pulse may reveal the inequality of aneurysm, the abnormal rate of block or flutter, the disturbed rhythm of premature contractions, block or fibrillation or the varying force of fibrillation, premature contractions or alternation.

Pulmonary râles may be the earliest and only demonstrable sign of circulatory disease. The same might be said of edema.

In examining the heart itself the point farthest out and down at which the movement of the apex is palpable is of great importance. When beyond the midclavicular line it is worthy of note. When to the examiner's knowledge it has moved outward or downward from no known cause outside the heart itself it is doubly important. Percussion of the heart is deceiving. When percussion yields any information, other signs more easily elicited tell more. Auscultation has been said to hinder more than help our knowledge of hearts. This may be true



where too much weight is put upon the discovery and interpretation of adventitious sounds—a field notoriously fruitful of error—and too little attention and thought is bestowed upon other phenomena. However, any changed or added sound perceived in or about the heart may be important evidence of circulatory disease, taken in conjunction with other signs.

Blood pressure readings may reveal low or high systolic or diastolic pressure, rising or falling pressures, high or low pulse pressure, the absolute irregularity of fibrillation, the occasional irregularity of premature contractions or the regular irregularity of alternation.

In order to avoid failing to see the woods for the trees the examiner must at all times bear in mind the prime object of examinations—to ascertain the nature and significance of the history, past and present, the subjective and objective signs and their bearing on the efficiency of the circulation, whether they indicate the presence, or foretell the coming in the near or distant future, of circulatory failure. The question is of the ability of the circulatory apparatus to maintain efficient circulation when called upon to meet the demands of efforts incident to the daily life of the individual.

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## EARLY EVIDENCE OF MENTAL AND NERVOUS DISORDERS.

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I know you well realize how utterly impossible it is for one to give a symptomatology covering so large a field as the subject of psychiatry in the short space of 12 minutes. Those of you who are well versed and have trained and specialized in this subject will, I trust, bear in mind the few points which I may bring out are for the benefit of the general practitioner and those men working along other special lines.

During the past few years great advancement has been made in the knowledge and scientific treatment of mental diseases. The field of psychiatry is now approached from an entirely different angle than heretofore. Not only are we interested in the case after it has arrived at the point for institutional care but we know through experience and practice that the individual throughout his life is continually contending with personality adjustments which were formed in early childhood and would indicate that the so-called problem child who presents evidence of unstable emotionality, who has been considered odd, eccentric, antisocial and sometimes incorrigible or delinquent, is in the formation period of a mental process which may later lead to insane tendencies. For this reason the profession now lays great stress upon and is particularly interested in the child before he reaches the institution—as early as possible—in order that these personality defects and environmental shortcomings may be corrected and the condition thus be prevented from reaching the stage where it would be necessary to commit the case to institutional care. It is often possible so to regulate the child's life as to make him a useful and productive citizen.

Mental diseases fall usually under 2 general classifications—the Organic Group and the Functional Group. The etiologic factors and symptoms of the organic group, which includes general paralysis, arteriosclerosis, cardiorenal and toxic psychosis, you who are internal medical men and general practitioners have considerable knowledge of. We are particularly interested in the symptomatology of the functional group. In this group we find the dementia praecox and the manic depressive forms of insanity and these are the forms of insanity which are now crowding your hospitals and institutions to the very door.

I cannot go too deeply into the symptomatology of these functional psychoses but let us consider some of the high points. Insanity does not consist in delusions but in the disorder of the thinking process which results in delusions. The transition which

frequently takes place from the real to the unreal may be gradual or may be accomplished in the twinkling of an eye; in the functional cases it is as a rule, gradual. The early symptoms and manifestations are first noticed by members of the family but seldom is any particular attention paid to them. If the child who is in an improper environment does eccentric things, is considered moody, odd, antisocial, presents numerous conduct disorders, is considered incorrigible, and sometimes delinquent, these are the warning signs that the doctor should be aware of in order to prevent the occurrence of something more serious. From this period the child gradually drifts into a condition where he becomes more seclusive, does not enter actively into sports with the other boys and is found to be shy and more or less on the out-skirts looking on rather than actively engaged. We then notice a tendency for him to withdraw to his room if visitors call to see the family; he may have some scruples about eating at the table with his own family and is found eating between meals in the kitchen when he thinks he is unobserved; he falls behind in his studies; he begins to suspect that friends who call at his home are talking about him and he becomes suspicious of his family.

The mental picture has now reached the stage where the symptoms have become more pronounced and the patient has become manifestly psychotic. Prominent symptoms at this time are functional headaches and insomnia; patient spends most of his nights wandering about the house, sleeping late in the morning, practically changing night into day; there is a gradual change in the patient's disposition, so that he loses his usual activity and energy, becomes self-absorbed, sullen, seclusive, irritable, obstinate, thoughtless and careless of obligations. We may now notice certain disorders in the train of thought which may be in the form of a flight of ideas, retardation or difficulty in thinking or circumstantiality where there is a frequent change of direction of thought but the goal idea is maintained and ultimately reached; or there may be a paralysis of thought when impres-

sions from without are not assimilated and form no association. We may now also notice disorders of volition which may be in the form of decreased or increased psychomotor activity, or impulsive tendencies; acts which are more or less uncontrollable, or the manifestation may take the form of marked negativism. There is present, usually, disorder of the emotional field, more often a progressive deterioration of the emotional life; there is a lack of interest in the surroundings—an early symptom which first attracts the attention of the family to the approaching disease. They notice a change in the patient's disposition, a laxity in morals, a disregard for former, cherished ideals, a lack of affection for parents and near friends. The emotional attitude is very often one of anxiety and depression which may later give way to moderate elation.

During the early stages of the disease the patient has some little insight into his condition and seems to realize that there is a change taking place; very often complaining that his head feels numb or empty. There are sometimes early defects of judgment and these defects develop rapidly and become profound. The train of thought is at first very little disturbed but sooner or later there is a profound disturbance—speech becoming both incoherent and irrelevant. There are other present disorders of attention, a condition where there is an inability of the patient to fix his attention for any length of time in one direction; an inability to properly concentrate.

In the early stages of mental disease the patient usually is oriented but as the disease progresses he becomes disoriented in one or more or even all fields. By orientation is meant the power of an individual to recognize and appreciate his environment and all that pertains to it.

Clouding of consciousness may exist to any degree. The patient may be so occupied by his delusions, or terrifying hallucinations, as to be quite unaware of the reality of the outside world; or there may be a scarcely noticeable departure from clear consciousness. In the early part of the dis-



ease there are few or no memory defects but as the condition progresses memory becomes impaired. I will say but little concerning illusions, delusions and the hallucinatory states as I am sure you are all perfectly able to recognize them when they are present and must realize that when the patient has reached this stage of mental disease he is in need of institutional care.

The personality defects which are almost always present, I will not go into extensively—it is a study in itself and is very often the key-note of the whole situation. I have tried to give you some of the more important symptoms which you may come in contact with in the early stages of insanity. You may find only one of two of these symptoms present when you examine your patient or they may all be present in the mental picture.

It has been said that there are no two normal persons alike and it can be just as truthfully said that there are no two abnormal persons alike in their make-up and symptomatology. Each patient is a study in himself, and it is most important to *get your abnormally quiet, reserved, timid, shy, bashful, retiring, secretive, selfabsorbed, preoccupied, unsociable child early*. Correct his environment, adjust his personality difficulties and prevent future disaster. If you cannot handle the situation send or bring the child to the mental clinic which your State Hospital at Greystone Park is establishing in the 7 counties of Northern New Jersey and let the trained men in charge of these clinics help you.

In conclusion, may I quote a letter which Dr. Curry has sent or is about to send to every member of this society:

"The aim of these clinics is solely an altruistic one and not for remuneration. We propose to place at the disposal of the medical profession and social agencies the service of a trained staff of specialists whose experience will be of value in interpreting these maladjusted, neurotic and psychotic problems purely as a consultation service. In every case referred the patient will be returned to the source from which he came, with recommendations and the proffer of

such assistance as may seem desirable from a psychiatric social service stand-point. Prescribing for such patients will not be attempted and when medical and surgical service is thought necessary the family physician will receive such recommendation with the hope that there may be a complete harmonious and ethical coöperation for the betterment of this great class of sufferers.

The purpose above all things is to keep the individual in his home, among his loved ones and to restore him, if possible, to his full capacity for work and a cheerful attitude toward life without the necessity for hospitalization which results in a double economic loss."

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## PRECLINICAL SIGNS AND SYMPTOMS OF GASTRO-INTESTINAL DISEASE.

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For the purpose of this discussion, it is assumed that preclinical signs and symptoms are early indications of gastro-intestinal disease. As a matter of fact, when signs and symptoms of disease, either functional or organic, can be noted, the disorder in question is already existent. Deductions may be drawn from the occupation, habitus, or general appearance of the patient, as to the type of gastro-intestinal disturbance he might suffer, but such deductions are not symptoms.

Preclinical symptoms or signs will usually be noted in a patient who presents himself to the physician for a periodic health examination or for some other condition not related to the intestinal tract, or for slight gastro-intestinal disturbance. Usually, however, when a patient presents himself with a definite complaint of gastro-intestinal disturbance, the disease in question is well established and the symptoms can scarcely be classified as preclinical.

Preclinical signs are, for the most part,

related to functional disturbances of the stomach or intestines. However, as organic disease results in functional disturbance, the early indications of this type are also of the functional variety.

### **Objective Signs of Gastro-Intestinal Disease.**

The color or complexion often gives an early hint. A slight icteroid hue will probably be due to hepatic or intestinal disorder, a sallow complexion probably to some degree of intestinal disturbance; redness of nose, eczema or facial rash may be due to overindulgence in carbohydrates or to other dietary indiscretions. Flabbiness of facial muscles, or drooping, would suggest possible intestinal toxemia or tendency to gastro-enteroptosis. A bright red tongue suggests hyperacidity; if thickly coated, it suggests gastro-intestinal catarrh. A heavy breath is also indicative of gastro-intestinal toxemia or indicanemia. The contour of the abdomen may indicate the gastro-enteroptotic type—elongated abdomen, flattened thorax, floating tenth rib, flattened epigastrium and bulging hypogastrium. Palpation of abdomen may reveal tenderness of slight degree, but nevertheless abnormal, in the region of the appendix, epigastrium or sigmoid colon; distention of the cecum, or other portion of the large intestine, with feces or gas, flatulency—general or localized—are all indicative of dysfunction.

### **Subjective Signs and Symptoms.**

Loss of efficiency is not an uncommon complaint. The patient states that he is able to do only half as much as formerly, feels tired and brain fagged. Of course this may arise from causes outside the gastro-intestinal field but it is frequently due to toxins, of which the intestine may be the source. Constipation is the most common and most important of all symptoms connected with the gastro-intestinal tract. If it has not already resulted in functional or organic disturbance, it surely will do so unless corrected. Constipation is a relative term, depending upon quality and quantity of food ingested. Intestinal stasis is the cause of more abdominal disorders than all other conditions combined. It is probable that

in many cases giving a history of fairly good bowel action, a test for colonic stasis would reveal a marked degree of constipation. Capricious appetite, failing appetite or abnormal appetite may indicate early gastro-intestinal disturbance. Metallic taste in the mouth may point to indicanemia. Headache, especially of the migraine type, should always lead to a suspicion of intestinal cause. Vertigo, unless of aural or high-tension origin, is usually associated with hepatic or intestinal disturbance. Periodic or constant mental depression may be due to an abdominal cause. Heartburn—important early symptom—is usually indicative of hyperacidity. Gas eructations or “water-brash” are also early symptoms of gastro-enteric disease. Pain may also be an early symptom; it may be due to gas distention, to gastric ulcer, or it may be that commonly known as indigestion. For the most part, pain is not an early symptom of disease in the abdomen.

Laboratory findings, while not in a strict sense signs or symptoms, may indicate early or impending gastro-intestinal disturbance. Urinary findings are often suggestive or diagnostic of beginning gastro-intestinal functional disturbance. Blood findings may be of interest in early diagnosis. Examination of stools may show that certain elements of food are not properly digested; that harmful parasites are present; that the flora of the colon is abnormal—all indicative of present or impending dysfunction or disease. The Roentgen ray examination, even when not aimed at the gastro-intestinal tract, gives at times a hint of a probable abnormal abdomen.

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## **PRECLINICAL EVIDENCE IN GYNECOLOGY.**

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In discussing the preclinical evidence or signs of gynecologic disease one has to bear in mind certain factors or causes of these diseases which are peculiar to women.



These causes may be classified according to the 3 periods of woman's life. First, that of girlhood; second, of the child-bearing age; and lastly, the period of the menopause. There are, however, many conditions which affect all these periods of woman's life: anatomic, hereditary and congenital causes, civilization and social conditions, education, unhygienic conditions, child-birth, sexual relations, criminal abortion, venereal diseases, accidental infections and traumatism, the different periods of life and lastly the influence played by the ductless glands.

The anatomy of the uterus and its appendages must be borne in mind, and its relation to the abdominal cavity. The fact that there is a direct communication from the outside to the peritoneum, by way of the fallopian tubes, produces a means by which infection can enter fairly easily. Inflammation and adhesions may be the result, and consequent distortions of the uterus and appendages, also gonorrheal, and tubercular infections may gain entrance by this means.

Hereditary and congenital causes play a great part in gynecologic diseases; the most common, perhaps, is the inherited influence of tuberculosis and malignant diseases.

Certain dermoid and parovarian cysts may be due to embryonic cell displacements. Also, congenital influence may produce malformations of the genito-urinary tract. Certain congenital defects of the pelvis may cause a general ptosis of the abdominal viscera and may be the source of pelvic lesions.

Civilization, as we know, causes a lessened amount of resistance to disease and this is especially true of pelvic diseases. The babies of savage races more often have small heads and there is less danger of cervical and perineal tears.

Social conditions play a very important part in cases of gynecologic diseases; this may be shown in both the poorer and well to do classes. The poorer classes are generally less well cared for in confinements and therefore are more prone to infection through the medium of lacerations and poor technic on the part of the midwife or doctor.

The classes that are better off are generally more neurasthenic and they bear diseases less well.

Occupation also effects many women, for those who have long hours standing on their feet are more apt to have uterine displacements, and this is also true of women who lift heavy objects.

Education of today is an important factor. The modern education of women in our schools and universities tends to develop the brain at the expense of the body. There is often too little thought given to the school girl at the age of puberty and during the menstrual periods. Many gynecologists believe that long continued cramped positions of the child in school have a great deal to do with the menstrual irregularities that develop.

Unhygienic conditions, such as neglect of personal cleanliness, may be a decided cause of disease. Also, the care of the intestinal tract and bladder is an important factor. A bowel which is constantly full interferes with pelvic circulation and naturally causes congestion of the pelvic organs. This may be followed by uterine displacements with the accompanying order of dysmenorrhea, menorrhagia and sterility.

Childbirth injuries are one of the most common causes of pelvic disease. This we find more often in the poorer classes owing to employment of the unskilled or careless physician. Perineal tears cause a destruction of the pelvic floor and result in rectocele, cystocele, hemorrhoids and displacements. Lacerations of the cervix may cause subinvolution, endometritis, menorrhagia, displacements, endocervicitis and malignant diseases. Carelessness and poor after-treatment of labor are altogether too common. Failure in sewing perineal and cervical tears, the keeping of the patient too long on her back, the use of too tight a bandage, and the getting a patient on her feet too early, all may cause trouble. All repairs should be made immediately after delivery and this not only means perineal tears but a careful inspection of the cervix, which is often neglected on account of inaccessibility. The custom of keeping a patient for a long

time on her back is an error which should be avoided; it tends to result in a sagging back of the uterus with a retention of lochial discharges in the vaginal cul-de-sac. A tight bandage will also force the uterus out of position and prevent its normal circulation.

Sexual relations: Single women may escape certain diseases of a gynecologic nature, yet, on the other hand, they are more apt to develop certain conditions due to celibacy. These may include fibroid tumors, painful ovaries, anemia, loss of fat and irregularity of the menstrual flow. Unnatural practice of intercourse in married women may be a cause of functional organic disease. Also, excessive sexual relations may produce exhaustion of the nervous system with a chronic congestion which may lead to endometritis, menorrhagia and other pelvic diseases. Criminal abortions are often followed by sepsis which may lead to sterility and chronic inflammation of the fallopian tubes. Venereal diseases, gonorrhea and syphilis may produce pelvic changes which result in sterility or even loss of life. Gonococci may lay, as we know, dormant for years and after marriage may cause a pelvic inflammation of a most extensive kind.

The influence of the ovaries and other ductless glands play a most marked effect in the cycle of woman's menstrual life. Menorrhagia, metrorrhagia and amenorrhea may be caused by a disturbed balance of endocrine function.

In girlhood, amenorrhea is not at all uncommon. The causes of such a condition are often hereditary, or it may be the result of an adherent prepuce, neoplasm, masturbation, slow development of the internal organs, absence of the uterus or ovaries, atresia of the genital canal such as imperforated hymen, or of such diseases as chlorosis, phthisis, congenital syphilis and endocrine disturbances.

In the child bearing age, we may have amenorrhea, dysmenorrhea, menorrhagia and metrorrhagia. Amenorrhea, in this period of woman's life, may be induced by many of the same causes we have just men-

tioned for the period of girlhood. Other disease factors may also cause this condition; mumps, measles, scarlet and typhoid fever are perhaps the most common of these. Further conditions which we may mention are operative removal of the uterus and appendages, obesity, suppression of menses from cold and psychic conditions such as fear, anger, anxiety and hysteria. We also have to bear in mind that long journeys may cause amenorrhea.

Dysmenorrhea is one of the most important preclinical signs and has a most varied and extensive etiology. Perhaps the most common cause is displacement of the uterus; that is, anterior and posterior flexion, the anterior being more likely to cause trouble. Among other factors, we have errors of development, neuralgia, pelvic congestions and inflammations, malformations of undeveloped organs, endocrine disturbances and obstruction, in which condition we must keep in mind the different flexions of the uterus. Pelvic congestions are very often the cause of dysmenorrhea and married women are more susceptible as congestion and inflammation are often directly due to sexual intercourse and child bearing. The normal congestion of menstruation should not be accompanied with pain. Also, in dysmenorrhea we must keep in mind over-exertion, intestinal disorders, uterine tumors, subinvolution, pelvic adhesions, chronic pelvic peritonitis, acute and chronic diseases of the tubes and ovaries, and lastly, tumor of the ovary.

Menorrhagia and metrorrhagia must not be confused with one another. Menorrhagia is the excessive loss of blood at the menstrual period, while metrorrhagia is hemorrhage from the uterus independent of menstruation. While these conditions are different their causes are practically the same, and can be divided into local and general. Under local, we have those of uterine, ovarian and tubal origin and with pathologic conditions in the pelvis. General causes may be attributed to acute and chronic diseases, reflex conditions and spinal disturbances. Those of uterine origin are displacements of the uterus, pregnancy, ma-



lignant diseases, benign tumors, disease of the cervix and inversion of the uterus. Ovarian and tubal causes are tumors and inflammatory diseases of the appendages. Pelvic causes may be fecal impaction, pelvic tumors, rectal and bladder tumors. In looking for general causes we have, as in dysmenorrhea, acute and chronic diseases such as purpura, anemia, malaria, syphilis, tuberculosis, etc. Also here we have to bear in mind disease of ductless glands and especially the part played by the thyroid gland; this is especially true in metrorrhagia. Reflex conditions such as hysteria, emotion, anger and fright may have a great bearing upon irregular menstruation.

The last period in woman's life, as measured from the menstrual cycle, is that of the menopause. This generally occurs between the ages of 45 and 50 years, although there is no hard and fast rule, for women have been known to reach this period as early as 20 years of age and there also have been women who menstruated up to 80 years of age. As a general rule, early menstruation means a late menopause, and vice versa. Certain diseases may cause an early menopause; such as typhoid or malaria. This change generally takes place gradually over a period of 2 to 3 years, or even longer. In some cases it may be of short duration. There are both mental and physical changes but it is the latter which interest us from a gynecologic standpoint. There are abnormal symptoms which have very definite bearing on our patient and certain factors which should always be kept in mind. Menorrhagia and metrorrhagia are never caused by the menopause and when we have a profuse or irregular menstruation they must not be thought of as due to a change of life. The same is also true of bleedings which occur after the menopause has been established and at any time in later years. If bleeding does take place after menopause it is generally proof of a pathologic condition such as cancer of the cervix, uterine body, or a benign fungoid growth of the endometrium. Generally speaking, all benign lesions tend to disappear at the menopause and discharges

cease. Therefore, if at this time a leukorrhea springs into activity a physical examination is urgent, as it is often a forerunner of malignant disease.

Preclinical signs so easily run into clinical signs that it is hard to draw a sharp contrast between them; however, by keeping the former in mind it is easier to understand the clinical signs and to make a proper diagnosis.

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### PRECLINICAL SIGNS AND SYMPTOMS OF DISEASE OF THE GENITO- URINARY SYSTEM.

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I have taken up this system in the following order—kidneys, ureters, bladder and prostate gland—and have attempted to give the preclinical symptoms and signs of the most common diseases affecting each part of the system as mentioned.

#### Kidneys

(1) *Hydronephrosis*.—The patient may have intermittent pain in the kidney region for years. This pain is indefinite in character. It may be dragging, is usually unilateral, and there is absence of urination frequency with intervals of voiding greatly increased quantities of urine. This condition is often induced by malformations, congenital or acquired, by prolapsed kidney with obstruction from kinking of the ureter, by stones in the pelvis or ureter, and also by papilloma of the kidney pelvis. Extraneous causes may be tumors or injuries.

(2) *Pyelitis*.—The most frequent exciting cause is obstruction, such as that due to a movable kidney, narrowing or twisting of the ureter; next in frequency are extra-ureteral and intra-ureteral stricture, and extension of infection from the bladder. Other preclinical signs are acute catarrhal inflammations of the mucous membrane lining the nose and throat, gall-bladder, urinary bladder and gastrointestinal tract. Exposure to

cold, fatigue, and traumatism are contributing factors.

(3) *Acute Suppurative Diseases of the Parenchyma.*—Acute unilateral septic infarcts of the kidney (Brewer Kidney), are due generally to lowered vitality and occur between the ages of 20 and 40 years. Females are more frequently affected than males and the right kidney is most frequently involved. Except for lowered vitality, there is no preclinical manifestations of its occurrence. The chief points of diagnosis are exquisite tenderness in the costovertebral angle, marked rigidity of the muscles protecting the affected kidney, presence of albumen, pus cells and red blood cells in specimens obtained by catheter from the diseased kidney, and a state of severe toxemia with septic temperature occurring suddenly in persons apparently well.

(4) *Acute Pyelonephritis.*—The history of the case invariably includes some antecedent disease or injury to the genito-urinary tract. In old men, hypertrophy of the prostate gland; young men, gonorrhea; in women, pyelitis, pyosalpinx or some pelvic peritonitis, or often postoperative conditions following injuries to the ureter. At first it is a low grade type of sepsis, indicated by an irregular temperature, more or less continuous rapid pulse, loss of appetite and strength, and gastro-intestinal irritation.

(5) *Chronic Suppurative Diseases.*—Pyonephrosis is usually the result of a long continued suppuration of the kidney, associated with obstruction. It may develop from an infected hydronephrosis, a renal calculus with an infected pelvis, a chronic pyelitis, a pyelonephritis, or abscess of the kidney. There is a history of urinary disturbance lasting for months or years. The original lesion may be referred to the urethra, prostate, bladder, ureter, or kidney, and is always associated with infection. The patient complains of dull, aching pains in the back or lumbar region and symptoms of a chronic low grade sepsis. The pains are aggravated by motion, are paroxysmal in character, and there are usually periods

of complete relief from pain depending upon the character and extent of obstruction.

(6) *Tuberculosis.*—As to frequency of tuberculosis of the kidney, Kuster found that 10% of those dying from tuberculosis showed renal involvement. Kronelin and Israel reported that one-third of all cases of suppurative disease of the kidney were due to tuberculosis. Age incidence is most frequently between 20 and 40 years and it affects men and women equally; 90% when first examined show involvement of only one kidney. The onset of the disease is so insidious and the symptoms referable to the kidney are so slight, that attention as a rule is not called to the kidney as a source of persistent pyuria or vesical irritability until the lesion is well advanced. Some patients complain of dull aching in the region of the affected kidney; in women, it is usually increased during the menstrual period. Frequently the kidney on the opposite side gives rise to some symptoms due to compensatory congestion and hypertrophy. It is frequently the case that the sound kidney is more sensitive than the diseased one. The usual symptoms of inflammatory disease of the kidney are lacking unless we suddenly get urethral obstruction. There is no renal colic, no pain referred along the ureter, no vomiting, no loss of weight or strength and no night sweats until the later stages of the disease. Occasionally we have mixed infection and calculus disease associated with tuberculous involvement, and this would change the clinical picture.

(7) *Renal Calculus.*—Primary stones are those which develop in the kidney without previous infection; uric acid, oxalate and cystin stones are primary. Secondary stones are those which develop as a result of a suppurative process, and these are phosphatic stones. Therefore, the preclinical signs and symptoms of renal calculi are dependent upon the amount of these ingredients excreted from the kidney, and also upon the history of previous suppurative disease of the kidneys. If an acute infection of the kidney is engrafted upon the calculus disease, the symptoms are accompanied by marked fever, septic manifestations,



such as pyuria, continuous pain and tenderness in the renal zone which does not subside but may be aggravated at times.

(8) *Renal Tumors*.—Carcinoma of the kidney is a comparatively rare condition and is seldom primary. It is seen mostly in the aged. Sarcoma of the kidney is more frequent and occurs almost exclusively in children and persons under 30 years of age. Hypernephroma is by far the most frequent form of renal tumor; comprises about 80% of the malignant growths of the kidney.

The first symptoms vary with the individual case. Some form of dull pain localized in the renal zone is a frequent complaint. An unexplained general weakness and steady loss of weight with cachexia may call for the first examination of the patient. Occurrence of a sudden hematuria is often the first symptom to attract attention. Accidental discovery of a tumor mass in the kidney region is less frequent. Various other symptoms, such as vomiting, jaundice, diarrhea and fever, are limited usually to the cases of hypernephroma.

(9) *Hemorrhagic Diseases*.—The most frequent causes of painless hematuria of renal origin are acute and chronic nephritis, renal varix, and villous papilloma of the renal pelvis. Acute inflammation of the kidneys is the result of congestion caused by poisons, such as cantharides and potassium chlorate, the toxemias which accompany the more acute infectious diseases, and congestion resulting from extensive burns on the body. There are 2 forms of chronic nephritis in which hematuria is apt to occur: First, the diffused chronic parenchymatous nephritis which is accompanied by paroxysmal attacks of severe hematuria where the amount of urine is diminished, the specific gravity is low and there is a large amount of albumen, many hyaline and granular casts, many red blood cells and leukocytes, and frequently blood casts and epithelial casts; secondly, the contracted and arteriosclerotic kidney, where the urine is increased in amount, lowest in specific gravity and contains little albumen.

Renal varix is a condition of localized in-

creased vascularization of a renal papilla. The patient, usually in good health, suddenly notices hematuria with the absence of any exciting cause. It occurs with varying frequency in men and women over 25 years of age. The hemorrhage may last but a few days, only to disappear and recur hyaline and granular casts, many red blood again, even after weeks, months or years; it may be continuous from the first, causing progressive anemia.

Villous papilloma may occur as a single papilloma or as a diffuse growth scattered over the mucous membrane of the renal pelvis. In the early stages, hematuria is the only sign of its presence. Hemorrhage occurs without a warning, independent of any cause, and ceases suddenly, leaving the urine perfectly clear.

Anuerysms of the renal vessels usually give a history of some injury to the kidney. The onset of symptoms is variable; the first symptom may be pain, hematuria or gradual formation of a tumor in the kidney region which is slightly tender.

*Filaria sanguinis hominis* infection shows hematuria alone or associated with chyluria, but this infection is rarely found in this climate.

Bilharz's disease is characterized by a persistent hematuria, bladder irritability, frequent urination and frequent association of renal and vesical calculi; the ova of the parasite is found in the urine. In Egypt, it is one of the most frequent causes of hematuria.

(10) *Unclassified Diseases*.—Single and multiple cysts are frequently associated with other diseases of the kidney, being generally simple retention cysts; such cysts are met with in tuberculosis of the kidney, neoplastic disease of the kidney and chronic interstitial nephritis. The symptoms are due only to pressure signs, and the pre-clinical signs depend upon the size of the kidney and the presence of a tumor with reflex phenomena from pressure. Polycystic degeneration of the kidney is almost invariably bilateral, and the patient suffers from anemia, cardiovascular changes, gastric disturbance, pain and discomfort in

the renal zones; there are evidences of nephritis, soft tumors in the renal zones which most often retain the shape of the kidney and increase steadily in size with no evidences of suppuration. The disease is most common during the first year and after the fortieth year of life; it is almost unknown between the first and twenty-first years. Echinococcus cyst of the kidney is very rare and is without noteworthy symptoms; history of a slowly developing tumor in the renal zone, usually the left side; hooklets rarely appear in the urine unless the cyst ruptures into the pelvis, when a ureteral colic develops. Syphilis of the kidney; syphilitic diffuse nephritis or gummatous tumors of the kidney are occasionally observed; the symptoms are headache, anemia, loss of weight and strength, with a history of exposure or of positive Wassermann.

#### **Diseases of the Ureters.**

The ureters are subject to the same diseases, both obstructive and inflammatory, as is the urethra. The occurrence of anomalies of development are relatively frequent in the ureter, appearing in about 3 out of 100 cystoscopic examinations. The most frequent anomaly is a double ureter on one side. This is important because the 2 ureters may lead to different portions of the same kidney, or to a superimposed kidney, the one portion being diseased and the other perfectly normal. If the lower third of the ureter is diseased, some change will usually be seen at the ureteral meatus. This is especially true of a descending calculus, tumor formation and tuberculous disease of the ureter below the brim of the pelvis.

(1) *Stricture*.—The same factors which cause strictures of the urethra may affect the ureter, namely, infections, trauma, etc., except that the gonococcus is uncommon. The first symptom may be a full pain in the region of the kidney or tenderness along the course of the ureter, or a resultant hydronephrosis following the obstruction. Strictures of inflammatory origin are dilatable and are diagnosed by inability to pass the ordinary ureteral catheter, accompanied by extreme pain as the catheter approaches the point of stricture.

(2) *Dilatation*.—This may take place as

a result of pressure on the ureter or of anything which obstructs the escape of urine into the bladder. Such conditions are accompanied by pain and symptoms referable to the kidney of that side. We may expect such symptoms in the following conditions:

(a) Due to spinal disease, the effect upon the musculature of the ureter and bladder owing to lack of innervation, because relaxed, and the ureter becomes flabby and dilated.

(b) Due to back pressure from obstruction, seen most frequently as a result of stricture of the urethra, enlargement of the prostate or tumor of the bladder.

(c) Pregnancy. In the majority of pregnant women the ureters are dilated, due possibly to direct pressure of the enlarged uterus and to changes in the innervation of the muscular walls of the ureter.

(d) Inflammatory lesions. This occurs most frequently in the vesicle portion of the ureter, due either to extra-ureteral or intra-ureteral causes.

(e) Obstruction. There are 3 distinct types: Obstruction due to anomalous renal blood-vessels; obstruction due to tuberculous disease of the ureter; and obstruction from calculi impacted in the ureter. The important points here are history of previous attack of pain, character of pain, location, radiation; there may be nausea and fever.

(f) Ureteral fistula, which occurs usually as a result of some traumatic or operative injury, as in extensive inflammatory conditions, or new growths in the pelvic organs.

#### **Disease of the Bladder.**

Cystitis is an inflammation of the bladder due to germ infection. Sudden acute congestion due to retention, chilling, irritating condition of the urine, or a foreign body are not considered true inflammations, since, unless there is added to this congestion germ infection, the condition is transitory and is attended by no lesions, barring vascular engorgement. Yet, while the congestion lasts, the symptoms are identical with those of acute cystitis.

The predisposing causes are those which favor congestion:

(1) Retention. Acute distention favors



congestion more than a gradual accumulation of urine, as seen in strictures of the urethra or in prostatic obstruction.

(2) Trauma. May be due to a jar, strain or contusion or laceration, rough instrumentation or bruising by a stone or foreign body.

(3) Muscular contractions, frequent or prolonged, may be excited reflexly by lesions, irritations, inflammations of the rectum, sexual organs, kidneys or urethra or may be due to hypersensitiveness of the micturition center, or to the habit of polyuria.

(4) Abnormal conditions of the urine; strongly acid or markedly alkaline, or low or high specific gravity. Severe burns, or overdoses of drugs, cantharides, turpentine, balsams, alcohol or arsenic.

(5) Tumors and calculi indirectly predispose to congestion by admixture of blood and urine, thus rendering it alkaline and peculiarly rich as a culture fluid.

(6) Surface chillings; wet feet, sitting on damp ground, may cause a congestion.

(7) Prolonged sexual excitement or sexual excesses may cause a marked hyperemia.

(8) Cardiac weakness, venous obstruction and atheromatous changes in the aged, enlarged prostate with retention of urine, a large cystocele following child birth, make the development of cystitis nearly certain.

(9) Lesions of the central nervous system cause congestion by destroying vasomotor control.

The exciting cause of cystitis is local infection, and this infection is commonly due to catheterization or urethritis. The microbes may also enter the bladder from the kidneys, by way of the blood or lymph channels, or they may pass directly from the rectum, this direct passage being particularly liable to take place in cases of constipation, inflammation, hemorrhoids or tumors of the rectum. Pericystic infection may also occasion local bladder infection by destroying the bladder wall and discharging pus into its cavity.

The organisms most commonly found in cystitis are the colon bacillus, staphylococci and streptococci, of the ordinary pus forming organisms, and the bacillus proteus vulgaris.

It seems clear that the gonococcus may invade a part or even the whole of the trigonum, but there is evidence that the remaining vesical mucous membrane is at least partially immune to its attack. Cases of true bladder inflammation traceable to gonorrhea are usually due to mixed infection.

The cystitis of syphilis is more commonly seen in the tertiary than secondary stage. These patients may have a marked retention with very little pain, or they may have sudden painless hematuria. Tuberculosis of the bladder is a disease of early and middle life, occurring chiefly between the ages of 15 and 40 years. It is found more frequently in males than females, and is usually associated with tuberculosis of the kidney, often with that of the seminal vesicles, epididymes and prostate. The predisposing causes have been found to be tuberculous nephritis, a general tuberculous tendency, often inherited, together with an infectious cystitis. Primary tuberculosis of the urinary organs is most likely to attack the kidneys. Tuberculosis of the bladder is usually a descending one from the kidneys. Occasionally it is secondary to tuberculous epididymitis or vesiculitis.

*Stones in the Urinary Bladder.*—For a calculus to form, 2 main factors are requisite: (1) a diathetic tendency to over-elimination of urinary solids, which form its basis; (2) local conditions which cause these solidis to conglomerate. The diathetic tendency is strongly marked in certain localities but there are so many factors entering into this, such as climate, surroundings, diet and habits, which differ so much that no general law can be deducted, which bears on calculus formation. Statistics have been compiled showing that among clinic patients the percentage is relatively high in individuals under 20 years of age, and due apparently to lack of proper nourishment, insufficient food and improper hygienic surroundings; on the other hand, over 60% of the private patients with calculus being over 50 years of age, of upper and middle classes, were predisposed to uric acid diathesis because of sedentary habits; vital activity was diminished, without lessening the quantity and quality of food ingested. The relative difference in length and dilatibility of the male and

female urethra, probably explains the greater frequency of calculus in men. The short dilatable urethra of the female allows small stones to pass through the urethra without discomfort while in the male they are more frequently retained and thus enlarged. The proportion of calculi found in the female bladder as compared to the male bladder is about 1 to 22.

*Ulcers of the Bladder.*—There are several types:

(1) Severe cystitis; preclinical signs, history of bladder infection with frequency, pain and hematuria.

(2) Tuberculous ulcerations; usually a history of tuberculosis of the kidneys, seminal vesicles, epididymes and prostate.

(3) Traumatic ulceration due to foreign bodies, stones or instrumentation.

(4) Typhoid ulceration; a history of having had the disease.

(5) Solitary ulceration of Fenwick is very rare. No definite preclinical signs; it is identified by the cystoscope, usually located near a ureteric orifice, on the posterior wall of the bladder. Fenwick believes this ulcer is likely to undergo tuberculous changes.

(6) Malignant ulceration is clinically characterized by frequency of urination and by pain referred to the suprapubic region or the external meatus. Hematuria is not an early symptom. It is frequently complicated by cystitis. The exact diagnosis can only be made by inspection.

(7) Parasitic ulcer of Bilharz is seen mostly in Egypt and the main symptom is painless hematuria.

*Tumors of the Bladder.*—The history and symptoms of a tumor of the bladder are seldom sufficiently characteristic to enable one to make a correct diagnosis. In the early stages of tumor formation, unless pressure exists, there are usually no symptoms. The first sign of trouble, as a rule, is a symptomless hematuria brought on by exercise or over-exertion. The attacks of hematuria are intermittent, increasing in frequency as the tumor grows.

### Prostate Gland.

In the acute type of prostatitis there is usually a history of exposure to infection,

most commonly by the gonococcus, and the prostatitis follows a posterior urethral infection with secondary invasion of the prostate gland. The early signs are urgency, frequency, pain referred to the perineum, with a sense of fullness in the perineum accompanied by vesicle and rectal tenesmus. Some patients have great difficulty in urinating, which may go on to complete retention. Frequently there are painful nocturnal pollutions, sometimes bloody.

Chronic prostatitis may be induced by acute or chronic posterior gonorrhea. It may be the result of a posterior urethritis caused by excessive masturbation in young boys and by sexual excesses and abnormalities in older men, such as long continued and ungratified sexual desire. Other causes are forcible injection of solution into the deep urethra and bladder by means of a large hand syringe. Also, motor cycling and horseback riding, and the all too prevalent "withdrawal" during intercourse to prevent conception. In prostatic abscess there is usually a history of recent gonorrheal infection; suppuration is ushered in by agonizing and constant throbbing pain in the prostate, with sweating, fever and chills, and there follows frequent painful dribbling of urine which may go on to complete retention.

Hydatid cysts of the gland are extremely rare and the only symptoms are interference with micturition or defecation, and pain; detection of a fluctuating, noninflammatory tumor would lead to a diagnosis. Retention cysts are associated with hypertrophied prostates and are sometimes found in newly born children. These may readily cause interference with micturition. In the early stages, carcinoma causes no symptoms indicative of the nature of the trouble. The first symptoms simulate prostatic hypertrophy of a benign type, difficulty and frequency of urination being the most common. The difficulty may be anything from a slowness in starting or a lack of force to the stream, to complete retention, or frequency increasing gradually until it becomes a condition of continual unrest. Pain and hematuria are later symptoms. Sarcoma is comparatively rare and occurs at any period of life, nearly 50% having been found in the first decade. Sarcoma usually springs from



the upper and posterior part of the prostate and grows chiefly in an upward and backward direction; for this reason disturbance of urination is a relatively late symptom. Occasionally the urethra is infiltrated and sarcomatous projections have been found in the lumen. Involvement of the mucosa of the bladder is rare. The earliest symptoms of the disease may be urinary obstruction or pain—rarely obstruction in the rectum. The course of the disease is more rapid than that of carcinoma.

Corpora amylacea are constantly found in the prostate and their presence can scarcely be considered abnormal. This name is given to them because they exhibit a granular nucleus probably made up of degenerated epithelial cells and mucus. In youth these bodies are microscopic in size and seldom cause any symptoms. As they enlarge they act as foreign bodies, exciting inflammation, and having deposited in and upon them lime salts, thus forming calculi, or they may come from the bladder or urethra and may be deposited in the prostate. The early symptoms are those of a posterior urethritis or a chronic prostatitis.

Syphilis of the prostate is exceedingly rare. A few cases of tertiary syphilis have been reported. There is a urethral discharge at times, during the secondary stage of the disease, when the mucous patches of the urethra may extend posteriorly and cause a profuse yellow discharge simulating gonorrhea.

Tuberculosis may be primary in the prostate or secondary to involvement of other organs either adjacent or remote. Primary tuberculosis of the prostate is commonest in the prime of life, frequently induced by posterior urethritis. The history in many cases shows that tuberculous involvement follows gonorrhea. The prostate is usually enlarged from inflammatory congestion, abscess formation takes place slowly, and ulcers form which steadily extend. Mixed infection supervenes. The symptoms are those of chronic prostatitis; complaint of frequent and urgent urination with a slight continuous or intermittent, glary mucopurulent discharge from the meatus.

Other conditions simulating prostatic disease are: (1) Retention of urine due to spinal disease. (2) Vesicle tumors arising near the

prostate. (3) Vesicle calculi which have slowly formed in the bladder wall and, lying near the prostate, eventually cause congestion of the prostate; with symptoms of prostatitis but characterized by frequency during the day.

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## PERIODIC HEALTH EXAMINATIONS.

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A. C. MORGAN, M.D.,

Professor of Medicine, Post-Graduate School of Medicine, University of Pennsylvania.

(Address to the Gloucester County Medical Society, February 18, 1926.)

The matter of periodic health examination is a practical and very important one. The thought has been that the age of 40 would be a fair working age for persons to report to the proper physician for periodic health examination. We must concede that when a man or woman reaches the age of 40, they confess, in their inner hearts, that they are not as young as they used to be, even if they do dance the tango and the fox trot; therefore, as the change of life then occurs or approaches, it is the time when stock should be taken and a review made of the personal general physical condition.

It is imperative that the first health examination shall be a particular one, that it shall impress the applicant with its importance, and that we shall by our personal interest in the individual, so enthuse him as to make him come back to us at each successive periodic time for examination. The usual recommendation has been to so observe his birthday, but that may be an inconvenient time for him or his doctor. I know some doctors who are arranging the dates for their periodic examinations at a time just before or just after their own vacation, or when their time is not taken up with teaching or hospital work, or, when released from hospital or college service. That is a matter that can be left in the hands of the individual physician; the important point to establish is that of some definite periodicity of examination.

There are certain points that should be

manifest with regard to the character of these examinations. First comes the condition of the heart and blood-vessels; therefore, the blood pressure examination and the rate of pulse should be ascertained. The renal function, in so far as the ordinary laboratory examination of urine goes, is usually sufficient for practical purposes, but in addition to the routine test for albumen, sugar and specific gravity, the best interests of the patient and physician are conserved by having a laboratory examination made for indican, crystals such as uric acid, calcium oxalate and phosphates, and the presence of tube casts. The weight and height of the patient, then the general history so far as his life is concerned, especially with regard to eating, work and relaxation should be determined. His general habits must be discussed, and then comes the very important matter of x-ray examination of the teeth. It is astounding how many infected and unerupted teeth are discovered by x-ray examinations, which will explain and easily solve the problem of many headaches and neuralgias. The matter of focal infection may have been somewhat overdone, but there are so many symptoms from which people suffer, and that are resultant from infection of teeth and tonsils, that such an x-ray examination is most important.

I can say assuredly that the Pennsylvania State Medical Society is in favor of promoting periodic health examinations, and so is the Philadelphia County Medical Society. We have printed forms, some of which I have here to show you, that offer an outline or working basis as to what points to cover in the examination. Of course, some of our enthusiastic brethren are riding this horse too strongly. I have seen one form on which about 200 questions had to be answered; that is too much. My thought is, to take as a basis such a blank as I shall give you, and modify it according to your needs, thus devising one of your own for your working model. This may be printed or mimeographed, or if you are satisfied with just a few changes, a rubber stamp may be used with a line of questions to cover a certain portion of the blank. Make it as simple as you

can, but as efficient as possible. The next point is, that always a certain portion of that blank should be for the use of the patient, to put upon him the responsibility of answering questions, to make him a sharer or partner in the examination. If, when a man comes to see you, he is asked a lot of questions, such as for a life insurance examination, it takes too much the matter-of-form for him and savors of an automatic examination, but if you ask the applicant to state in writing his previous diseases, his symptoms if he has any, and those thoughts which are uppermost in his mind, even suspicions if you please, as to whether he has any abnormal condition, all these things may put the responsibility on the applicant, and I promise you when it comes to your time for questions, that man will be ready and willing to coöperate with you.

Coöperation is most important in periodic health examinations; just so much as the applicant puts himself into his side of the examination and we inject our personality into our side of the process, therein will we outshine and out-rank the mechanical or card index headquarters attitude represented by institutional examinations. Today I had a man in my office who had been in the Life Extension Institute, of New York, for 5 years. He has very bad teeth. I recommended 2 years ago that those teeth should be taken out, and the man showed me a report from the Institute in 1924 recommending that he should have the teeth removed. I read to him from my notes concerning those teeth. What had happened? That man, exhibiting human nature, had yielded to vanity and pride, and had had extensive bridgework done, retaining infected teeth because he did not want his friends to know he had false teeth. I am going to write this man a letter and tell him that he has too much pride and not enough calcium salts in his back bone. There is no use in our examining people and reporting anything of the examination unless they will coöperate. You may serve ever so faithfully, you may strive ever so hard to give a man a thorough examination, but unless he coöperates, the result is a failure.



What are the conditions, or what are some of the symptoms that you can and should lay stress upon in the course of the examination? I would stress 4 symptoms in particular. They are dyspnea on exertion, cough, expectoration and cyanosis. All are simple of determination and I attach great importance to them. If a person has shortness of breath on exertion, or if he has dyspnea, that person's heart is not proving equal to the load put upon it at that time. If the dyspnea becomes more prolonged, more easily excited, then his cardiopulmonary balance is still more greatly disturbed, and when he has disturbed cardiopulmonary balance the first effect will be hypostatic congestion of the lungs, giving rise to cough and, finally, edema at the bases of the lungs. Physical signs will demonstrate this—the symptom is merely suggestive. Cough is related to the dyspnea and if this symptom is severe, expectoration will accompany it, mucoid, or viscid and there may be spots of blood. Then look for blueness of the lips or finger tips, nose or ears.

When you have schooled yourselves to use this quartette of symptoms you will be able to gauge fairly well that man's reserve. I have followed this outline for some years and can testify to the value of observing these symptoms in sequence. When a man has cyanosis, whether slight or pronounced, it tells us the cardiopulmonary imbalance is extensive, and in a man of 40 or over who develops it for the first time, we must again think of the cardiopulmonary imbalance of retention toxemia. Whether that retention toxemia lies in the renal tract or is ascribed to focal infection, probably from the teeth, tonsils or sinuses, it is always of major significance.

Nosebleed occurring in a man or woman over 40 always has a true signification. A young person who develops nosebleed may be the subject of rheumatic disease, may have some tonsil or adenoid condition, may be a bleeder or may have some anemia, but the person of 40 or over who develops nosebleed for the first time, always suggests the likelihood of other causes. If between 40 and 50 it is ascribed to hepatic sources; if

over 50 these nosebleeds suggest to us that the patient has a chronic interstitial nephritis. The same may be said of subconjunctival hemorrhage; when a person exhibits spontaneous subconjunctival hemorrhage it is significant of friability of the capillaries and indicates a condition of chronic arteriocardillary hypertension.

Calf cramps at night, another important leading symptom, are so common in advancing years that many people think they run in the family; father or mother have had them and therefore they expect to have them and they attach no significance to them, but, given headache, dizziness, capillary hemorrhage and calf cramps, I can predict that they mean hardening of the arteries, and are only signs before the storm that will break.

I am grouping symptoms so as to show you how easily we can get their relative importance, and estimate the likelihood of their appearing in certain parts of the body.

After 40, we have in some people the cancer diathesis hovering in the offing, with the attending cachexia and loss of weight. I examined a man the other day whose heaviest weight was 178, recently 164, then 5 days after he had weighed himself, it was 161 in my office. Ten days later I put him in a hospital and he had lost a pound, only a pound, but it was on the same scale and in the same clothes. That man had a so-called indigestion, but he also has a carcinoma. X-rays show a delay in stomach filling from causes outside of the stomach. I have seen a couple of similar cases that at exploratory operation verified the diagnosis of carcinoma.

Loss of weight is, therefore, important, and in the man or woman over 40 who begins to lose weight, we must always be suspicious as to the cause. Diabetes, chronic nephritis, tuberculosis, syphilis and carcinoma are a few of the likely causes for loss of weight. As a rule, men and women take on weight after 40 and it is said of the ladies "they become pretty well upholstered", and take on matronly outlines, all being a part of the menopause, but if a woman takes on too much weight after the menopause, we

must remember that over-weight on the outside is only part of the fat retained inside, and if this increase is too great, that woman is going to suffer from extra strain that is placed upon the heart.

About the age of 40 men have sometimes begun to accumulate money and then to fly high, especially with regard to eating. They indulge very heavily and somehow or other, men taking on fat, are fond of candy, cakes, whipped cream, potatoes and foods that are rich in fats. They walk and exercise less, and a good deal of ashes and clinkers form in their bodies causing blood-vessel changes which later result in chronic arterial hypertension. If the man would continue with physical exercise at the same time he is beginning to eat more, he would be all right, but unfortunately a man of 40 becomes so occupied in business that he has no time for exercise; he overeats, overindulges, has a tendency to late hours, and in the course of a decade he is so saturated with poisons that he comes to us a wreck.

Angina pectoris is the doctors' penalty, the doctors' fashionable disease. Why? Because doctors are only human and doctors disobey the laws of nature perhaps more than any other body of men I know. Ministers, perhaps in the kind provision of Providence, do not have too much money. If you are on a Board of Trustees, do not use that argument, but ministers do not lead the irregular lives that doctors have to lead. Lawyers suffer to some extent, but doctors seem to be penalized in the matter of cardiovascular diseases developing in the fifties. The average age of a doctor's life is 57 years, the age which, fortunately, a good many of us have reached and hope to go beyond, but I want to tell you that doctors are most negligent of their own well being. Two years ago I was one of a large Board of Doctors who examined physician subjects so as to instruct them in following the proper methods of examination, and it became my duty to examine 5 of them. The first was a man of 77, a graduate of Jefferson, and he was just eager to be with the "boys" at their reunion smoker. I presented him to John Beardsley and said "John, this

is one of your young fellows." Dr. Beardsley asked him what class he belonged to, and he answered "69". John said, "There is a man over there who was graduated in 68". This man was the best preserved in the whole lot. The others had rotten teeth; astoundingly bad tonsils; 2 with fistula in ano; 2 with hemorrhoids; and the old gentleman was the noblest Roman of them all.

Why is it we doctors so frequently have angina pectoris and cardiovascular disease? It must be because of our irregular life, not with regard to dissipation, because a man may be moral in the accepted sense—may not have the so-called bad habits, and be quite free from venereal taint—yet he succumbs. Why? Because of our long hours of work, our irregular times of eating, our failure to take vacations, and the general neglect of our own bodies. A doctor should always be the servant of everybody, but he should be the slave of none. How many of you have office hours in midday or in the evening close to meal time? Practically all of you. How many of you are such slaves that when the buzzer makes a noise or patients are announced, you hurry through your meal or you get up from the meal and go in to wait on that patient, or, if a patient is waiting, you begin to get restless and do not take time for social conversation nor for any domestic pleasure, but hurry into your office. Why? Because you are a slave. Very few men in other occupations or callings will do that. It is said of the late William Pepper that he was so busy that he would have a lunch brought in to him and would eat the lunch while talking with patients; some time he was so tired that he kept a couch in the office and would lie on this couch for a 5 minute rest. A wonderful man, yes, but he died of angina pectoris at the age of 55. Was the game worth the candle?

When it comes to periodic health examination, we ask the man these questions as to the hours of work, his lack of exercise, overeating, short hours of sleep, failure to take vacations, poorly ventilated living rooms and offices, and give him our advice—



but how prone are we to think that this is fine for the other fellow, and how lacking in our duty to ourselves!

Under loss of weight, tuberculosis comes in for consideration. As you know, tuberculosis is most common between the ages of 10 and 30. At 40 there are so many factors in the background to sap the patient's strength, lower his resistance, destroy his immunity and favor the lighting up of an old tuberculosis. This is particularly true after an attack of so-called influenza and there is much that masquerades under the name of influenza that is not influenza; symptoms of influenza may simply be the result of infections of the body by a germ that seems to favor the respiratory tract. I had a patient some time ago, a young girl with acute ulcerative endocarditis, who had exactly the symptoms of influenza though the condition was entirely different.

Under tuberculosis we must consider again shortness of breath, cough and expectoration. Here, the shortness of breath, cough and expectoration are accompanied by loss of weight, night sweats, and the background of pallor and anemia. As we look at patients than who are robust and apparently well nourished, with similar symptoms, we do not find tuberculosis, but must look elsewhere for the cause of these symptoms. Patients with cardiopulmonary disease do not lose weight rapidly, but a patient with tuberculosis will have these symptoms plus loss of weight.

Now, in general, these symptoms would cover the leading points of examination of the individual. Sometimes laboratory tests will be necessary if the patient gives, for instance, the history of syphilis. Search for the ordinary clinical symptoms, such as we had to rely upon before the Wassermann test was available, will generally suffice, but, if necessary, have a Wassermann test made. If the patient looks anemic, have a blood count made. If these laboratory tests are to be made, then it will be necessary to recall the patient at an appropriate time suitable for both to enter into conversation, when the doctor is not pushed for time and the patient is at ease. There

should be this getting together; as the Good Book says, "come and let us reason together", and in so far as that doctor is able to inject his personality into the examination and put his message over because of his personality, and in so far as the doctor can show that he practices what he preaches and can testify to the patient that he himself has submitted to x-ray examinations or that he has had his tonsils removed, that he has blood pressure recorded and a urinalysis made, and that he is trying to take care of himself with regard to diet, it will comprise one of the best arguments that he can use to put his subjects across. If, however, you are hurried, if you are not in even temper (the pot dare not call the kettle black in this case) and doctors do sometimes lose their tempers, you will fail in putting the message over; then the effect is lost because we ourselves have failed in our trust. If we can put the message over, however, and make our patient feel that the responsibility is now up to him, then we have discharged our duty by personality and example and we can later ascertain whether or not he has complied with our direction. If the patient does coöperate and carry out fully all we have recommended, then he will be one of the best recommenders that we know; if, however, he fails, he is going to discredit periodic health examinations, and if this is true, either he is of the stubborn type or the doctor personally has failed in putting over the value of these examinations.

I might say a word about fees. How much should we charge for a physical examination or periodic health examination. Here is a proposition. It is worth more in time and in effort than an ordinary examination. It means more to the patient than a simple life insurance examination, so I am always sounding this word to the doctors—"Charge at least a minimum fee equal to the maximum Life Insurance Company fee for such examination." If you are getting \$5.00 or \$10.00 or more for the Insurance Company, then tell that man you are worth that and more to him for his work. Do not take a \$2.00 or \$3.00 fee, be-

cause, if you cheapen your work to that individual he will appreciate you proportionately, but if you explain to him the real worth of the procedure he will be willing to pay a reasonable sum.

With regard to keeping records. Very few doctors do keep complete records; they say they are too busy. I challenge that statement. You can get an ordinary container for a few dollars and folders are about a cent and a half each, for each individual case record. Show the patient that you have system and you will gain his confidence. The younger men, who were in the Army or Navy, have had a wonderful education, especially as to card index records, and they expect you to keep some kind of records

rather than trust to your memory. The generation now growing up is going to be your mainstay in practice. If you give them evidence of your systematic keeping of records they will not change doctors readily for they will say, "Dr. So-and-so has my record in his file, and I will go back to him." I can testify to this, personally, that a card record history has been the means of keeping many patients who would otherwise have gone elsewhere.

There are many other points that might be mentioned but I do not want to burden you with too long a talk, and in closing I will only reiterate that the value of periodic health examinations is proportionate to the personality of the doctor and the coöperation of the patient.

#### AT JOURNEY'S END.

This, in a twilight, was the thing I saw—  
Can it be true?

Outside the City walls  
Camped a great multitude from far and near,  
Waiting what time the gates should be wide flung  
And they might enter as had been foretold.

Sounds of soft music on the wafting breeze  
Gave subtle prescience of the bliss within  
Prepared for all the weary of the earth;  
Whence, languorous sweet, came perfume of the  
rose,

Sound of the bees amid the clover blooms,  
Murmur of streams from springs in mosses hid,  
And fragrance of all fruit from laden boughs.

Ever they grew, the patient waiting host  
Gathered slow one by one without the walls;  
While long drawn out in countless hoary folds  
Time drooped above them like the old gray moss—  
The bannered moss—that hangs from tropic  
trees,  
Long, gray and still, unstirred by sigh or sound,  
Shrouding the shadow with its deeper gloom.

"Now who are these?" I asked, who had but  
come  
To that dim trysting place of waiting souls.  
"They are," one answered, speaking not with  
words

But from far deeps the hidden self within—  
"Prophets and sages who outspeed the rest  
In all the aeons and in all the climes,  
But here must tarry till the rest arrive."

"But may not these return and teach," I asked,  
"So they, the swift souls, urging on the slow,  
Shall make the way less weary for them all,  
Nor any waiting at the journey's end?  
Now, all their wisdom but to patience grows,  
And droops above them like the long gray moss!"

"Nay, none may help; each walks his path  
alone  
And brings to fruit the seed in his own soul.  
Each has all time, which measures from the first  
To very last, and then shall be no more.  
One body all, and issued at one birth  
With every part apportioned work to do  
In equal share according to its kind,  
Each must be perfect for the perfect whole;  
So at one glorious death to enter Life!"

This in the twilight was the thing I saw;  
Useless it is to speed above the rest,  
For all must wait until the last arrives!  
Can this be true, O Merciful and Wise?

M. E. BUHLER.



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Each member of the State Society is entitled to receive a copy of the JOURNAL every month. Any member failing to receive the paper will confer a favor by notifying the Chairman of the Publication Committee of the fact.

NOTE.—The transaction of business will be expedited, and prompt attention secured if,—

All papers, news items, reports for publication and any matters of medical or scientific interest, are sent direct to THE EDITOR, Atlantic City, N. J.

All communications relating to reprints, subscriptions, extra copies of the JOURNAL, books for review, advertisements, or any matter pertaining to the business management of the JOURNAL are sent direct to THE CHAIRMAN OF THE PUBLICATION COMMITTEE, (address above), Newark, N. J.

## TO MAKE A CORRECTION.

Our attention has been called to an error in the communication from Dr. Hunter, Secretary of the Board of Trustees, addressed to the Presidents and Secretaries of County Medical Societies, as published in the Journal for March (page 138), and we desire to acknowledge responsibility for the mistake and to make proper correction.

At the special meeting of the Trustees held January 20, 1926, Dr. Eagleton presented a report prepared by himself and Dr. E. J. Ill as members of a committee previously appointed to consider the advisability of providing for reconstruction of the Board. The section of that report which proposes a revision of the scheme of selecting Trustees, reads as follows:

"The Board of Trustees shall consist of twenty-eight members, (as now constituted). Seven officers by virtue of their office. Five representatives of Judicial Districts to be elected as representatives of the permanent delegates. Six representatives of the Fellows to serve for three years each. Ten delegates-at-large to be elected by the House of Delegates to serve the term of five years each. Any of the ten delegates-at-large may be Fellows if they are chosen by the House of Delegates."

In explanation of the error in publication we beg to say that in typing the copy to be sent to press one line of the original manu-

script was skipped; a sin of both omission and commission.

## THE STATE SOCIETY CONVENTION.

Those members who have not yet engaged accommodations at Atlantic City for the Annual Meeting (June 17-19) should do so at once. No member can afford, really, to absent himself from these periodic gatherings of the State Society. At such conventions one comes into more intimate association with his colleagues; secures an especial opportunity to learn to know his brother as himself; absorbs the available additions to his scientific knowledge; and, withal, enjoys a vacation from work.

We are informed by the Chairman of the Committee on Scientific Program, Dr. Darnall, that the forthcoming meeting will be one of exceptional interest. There will be a symposium on the medical aspects of "Cardiovascular Renal Disease", inaugurated by Dr. Frederick S. Allen, an authority of note in this field. Dr. Hugh H. Young, of the Brady Clinic, Johns Hopkins University, will head a symposium on Urology. Dr. Samuel Lambert, of New York, will direct a moving picture "Exhibition of Heart Lesions." These represent only the *high spots*; many other interesting and valuable contributions are listed.

The Chairman of the Committee on Arrangements, Dr. Reddan, writes that the en-

tainment this year will be unique in some respects and pleasing in every way.

Come! Let nothing keep you away from this meeting! And, bring the family. Wives, mothers, sisters, sweethearts, daughters and sons can all find entertainment, pleasure, new life at Atlantic City.

### A NEW JOURNAL DEPARTMENT.

The success that has attended establishment of several special departments in the Journal during the past year—those under the headings of Economics, Ethics, Esthetics and Lighthouse Observations—emboldened us to inaugurate an additional feature with the April issue. Under the broad title of "Lay Mirror Reflections" we propose to present clippings from the lay press as they relate to approval or criticism of professional matters; accompanying such quotations at times with appropriate comment. The new department will thus be comparable to those popular columns of newspapers and magazines sometimes called "Boosts and knocks" or "Bouquets and Brickbats"; with us, a means of calling the attention of the profession to the attitude of the public toward some of our problems.

### INFLUENCING LEGISLATION.

Styles change even in the manner of performing the simplest of acts. The standard customs of yesterday are not recognized as the "correct thing" today. And such changes are not limited to dress and social deportment, but extend also to business conduct and the general procedures of dealing with organized groups of society.

The Hearld-Tribune (Sunday, April 4.) contained a detailed explanation of the present mode of bringing influence to bear upon the National Congress, emphasizing particularly the decadence of old time methods of lobbying at Washington and the greater effectiveness of newer processes.

No longer are Senators and Representatives "button-holed", threatened or cajoled, or importuned by aggressive lobbyists on the floor or in the corridors of the halls of Con-

gress. Instead, those who seek to influence the action of members of Congress place in the hands of Representatives, by one means or another, the information designed to enlighten them and advise them how to vote—if they would please their constituents—and then calmly keep watch upon their actions. If perchance the Congressman does not perform as requested or expected, his constituents are informed by letter or telegram, and almost immediately he begins to receive "messages from home" notifying him to change his course or prepare to accept the consequences.

That the old time method is out of date in state legislatures as well as national, was indicated early in the recent sessions of the General Assembly of New Jersey, when the "Dean of the House" made a speech vigorously protesting against the presence of lobbyists on the floor, interfering with the privacy of members and generally obstructing the business of the Assembly. In a scathing rebuke, Mr. Pascoe said in part:

"All of us come here with the expectation that we will be permitted to carry on the work of this body unhampered by any outside influence and that we will be given a free opportunity for debate and deliberation on the matters that come before us. Unfortunately, because of a most persistent lobby who seem to have no regard for the members, but who annoy, discommode, and interfere with us during the working hours of the sessions, we are unable to give that attention which is necessary for a proper, careful and conscientious consideration of the serious matters that we must pass upon. \* \* \* \* It is time to call a halt. \* \* \* \* We must now ask you, Mr. Speaker, to direct the proper officers of this House to comply with the rules of the House and your instructions to keep the floor free from these annoying lobbyists, in order that we may expedite our work."

Fortunately, the State Medical Society, though utilizing its prerogative of offering members of the legislature information on bills pertaining to medical matters, did not come in for a share in that criticism. We had adopted the more modern, and apparently the more effective, method. When opportunity arose or could be made, members of the Assembly were approached directly, for a discussion of pending bills, but chief dependence was placed upon a series of written communications, addressed to the representatives at their homes, where they had time to give them proper consideration—



letters explaining which bills the medical profession favored and which ones they opposed, and giving in each case succinct reasons for the position taken.

The new method worked as well as could have been expected this year but it can be made even more efficacious another time. Success with this plan presupposes certain preliminary preparation and advance arrangement for coöperation of all possible active factors at the proper moment. Therein rests its secret of success; a definite purpose and plan upon which all are agreed, and, prompt response of each individual when his "cue" is flashed.

Larger corporations and organizations of various sorts, that have frequent need to seek special legislation have learned not to introduce any measure until there seems to be a reasonable prospect of securing its passage, because to suffer defeat is not only to waste energy but to lose prestige with the legislative body. This counts for more than one might at first glance suppose; an organization that acquires the reputation of winning all its battles, whether for or against proposed legislation, establishes a much more favorable standing and carries far more influence than one that suffers frequent defeats. Anyone may be forced to fight a defensive battle but rarely is anyone forced to start an aggressive campaign at an unfavorable moment.

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### CHANGING THE CONSTITUTION.

In the March Journal was published a letter from the Secretary of the Board of Trustees stating that the Board had requested a referendum upon the advisability of amending the State Society Constitution in respect to the organization of said Board and the manner of choosing its membership. This letter stated that there appeared to have been some criticism of the basic construction of the Board, implying that it constituted a "close corporation", some complaint that as organized it is not a "democratic body", and that out of this complaint and criticism had grown a proposition to amend the Constitution. Reading between the lines,

one might infer that members of the Board of Trustees had felt themselves in a somewhat embarrassing situation; in the submitted amendment there was implied criticism of their conduct of the Society's affairs and a proposition to legislate them out of office, and yet no dissatisfaction had been expressed and no reason given for proposing the change. The Trustees had taken cognizance of the proposed amendment affecting their tenure of office, had considered whether there is any necessity for a change in the organic structure of the Board and whether a Board chosen in any different manner could better serve the interests of the Society, and had finally decided to ask the members of the Society whether there exists any serious dissatisfaction with the Board or whether there is any wide-spread discontent with the Board membership or Board actions, and, if so, what better plan for the selection of Trustees for the future might be adopted. Through the proper officials of each county society, every member of the State Society has been asked to express himself upon these points.

Altering the fundamental laws of any established organization is a grave matter and something that should not be done lightly or thoughtlessly. Especially is this true of an organization that has been functioning satisfactorily for a period of time. Change does not always mean improvement. It is comparatively easy to tear down a structure but it takes much time and a deal of labor to construct a better one. We would not say that the Constitution of an organization should never be modified, for that would block all progress, but we would certainly say that the basic laws of a society should not be changed without good and sufficient reasons accompanied by substantial evidence that the proposed change will result in a decided improvement.

With that idea in mind, let us consider the question at issue. The "visitor from Mars", reading the letter referred to, would very naturally inquire "What's the big idea"? What has your Board of Trustees been doing, wherein has it failed, that you are asked to make this radical change in its

construction? What are the criticisms of, what are the complaints against, the present Board or the method of its selection? Has the Board as a whole, or have individual members of the Board, been guilty of misconduct or neglect of duties, that you should consider removing them from office? Is that portion of the State Society's work entrusted to the Board being properly conducted, or not? What is the real reason for suggesting this change and in what respect is the proposed change expected to improve conditions?

These are pertinent questions which every member of the Society would do well to consider and which every member of the House of Delegates should certainly ponder with due care. The State Society is completing 160 years of existence. It is the oldest State Medical Society in the United States, and at the same time one of the most progressive of state societies; there may be others that make a bit more noise about what they are doing but there is none that has heretofore surpassed this Society in usefulness and none that is today rendering better service to its members and to the public. An organization of which that can be truthfully said must be functioning fairly well regardless of its structural formation. After all, is it not the "man behind the gun" that counts; is it not the character of the men who comprise the organization and the attitude which they take toward their duties and obligations, the conduct of chosen leaders rather than the means of their choosing, that counts in the procurement of such results?

There is, apparently, no word of criticism of any action taken by the Board nor of any individual as a Trustee; no malfeasance and no neglect of duty charged. The nearest approach to anything of a personal nature, in so far as we have heard, is the suggestion that whereas each President of the Society, on retiring from that office, becomes a member of the Board of Trustees and holds the latter office for life, there might result a condition in which some member should outlive his usefulness to the organization; in other words, that the Board may accumu-

late some "dead wood". But that is purely a theoretical proposition and seemingly does not apply to present conditions. One glance at the list of Trustees will show that every member of that class, member by virtue of being a Fellow and an ex-President, is mentally alert and physically active. Indeed, some of the most active members of the State Society are to be found in that group of men. And, suppose they were disposed of by changing the Constitution, or that they should suddenly resign their positions, where could you procure a group of superior men to replace them? Is it not patent that any member who has attained such prominence in his local county society, or who has by some other means so attracted the attention of the State Society as to win the honor of election to the Third Vice-Presidency, and who has then followed through the vice-presidential chairs and served a year in leadership of the organization as its President, is better fitted to become a Trustee than is likely to be a member chosen without regard to previous experience by the House of Delegates? To argue otherwise, is to argue that experience is practically worthless.

There are rumors of complaint that the Board as constituted under the existing laws is or may become a "close corporation", and that present conditions do not permit of choosing a Board on democratic principles. The first question may be disposed of by showing that it cannot be a very "close" corporation because of the fact that 12 members are subject to annual election and there are now only 15 members by virtue of being Fellows; a higher power than the State Society constitution disposes of the latter's tenure of office and prevents their accumulation. As to the "democratic" issue, what earthly reason can there be for making such a Board democratic? What is the function of a Board of Trustees? It is not a legislative body? The Board's function is to safeguard your property interests and to transact any emergency business that may arise in the intervals between meetings of the House of Delegates. A Trustee should, therefore, be someone fami-



liar with the working history of the organization, of proved fidelity to the Society's interests, and trustworthy to the highest degree. Is it possible to secure for such a position better qualified men than those who have been selected by yourselves because of their character and who have demonstrated their interest in the organization's welfare?

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### BIGGER AND BETTER.

The general slogan of this generation, whatever movement it may be characterizing, is "Bigger and Better", and while it savors a bit of "Babbitt" it does serve a useful purpose in some respects; serves occasionally at any rate to stimulate one to more strenuous efforts. It may be questioned whether it is desirable to make the Journal much larger than it is but there can be no question of the desirability of making it just as good as may be possible.

There has been, during the past year, a steady and very gratifying growth in the amount of material offered us for publication, so that we are now virtually compelled to publish 6 to 8 original articles each month as compared to the average of 3 or 4 we were carrying. We believe, too, that there has been a coincident improvement in the quality of papers submitted; more first-class original articles are now presented and we are in a better position to choose our papers on a basis of worthiness. Further increase in size has also resulted from the greater number of county society reports promptly sent in, and from the fact that other medical organizations of the state are contributing their proceedings for publication. Altogether the Journal has grown in one year from an average of 32 pages of reading matter monthly to an average of 52 pages; an increase of 60%. A pleasing increase in advertising is also to be noted, as Dr. Ben-

nett has raised that space from 32 to 36 pages monthly.

As indicated above, however, we are more concerned about making the Journal "better" than we are about watching its growth in size. To meet the needs of all members, a periodical of this character must carry something of interest to each in every issue; this we are attempting to do. The special departments of "Medical Economics" and "Ethics" touch upon problems of daily import to the practitioner, and the section devoted to Esthetics affords a certain variety of interest to relieve the monotony of professional strain. In "Observations from the Lighthouse" we are endeavoring each month to treat of some feature of medical progress, calling attention to new discoveries, presenting a review of results obtained from experience with comparatively recent discoveries, or summarizing the most recently expressed opinions concerning important scientific problems in different fields of practice. The latest department opened, "Lay Mirror Reflections", is designed to show in some measure where we stand with the public, without entering into any active controversy over differences between lay and professional opinions. The past few months have brought us a series of interesting letters for publication under the head of "Communications", but we could stand a good deal more of that sort of thing and hope that members will more frequently send us letters setting forth their views upon important topics.

We hope to introduce in the near future two or three additional specific departments, to broaden the scope of medical interests and to elicit still greater personal interest in development of the Journal. As we have said before, this is your Journal and we will welcome suggestions tending to its further betterment. It is well on the way to becoming a significant state society Journal and we again invite your assistance in its development.

## In Memoriam

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NEER, Rush, 288 Graham Avenue, Paterson, one of the oldest and best known physicians of that city, died at his home, March 20, 1926.

Dr. Rush Neer, son of Dr. David Neer, was born in Charlottesville, N. Y., October 2, 1849, but had lived in Paterson since 1851. He attended public and private schools of Paterson and received his medical degree from the Long Island Medical College in 1880. Dr. Neer is survived by a widow and two sons, one of the latter being Dr. Frank Y. Neer, of Paterson.

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COBB, George Henry, 117 Irvington Avenue, South Orange, died at his home, on April 5, 1926, after a two weeks' illness of influenza and pneumonia.

Dr. Cobb was born in North Andover, Massachusetts, January 20, 1863. Graduating from Amherst in 1885, he entered upon the study of medicine and obtained his doctorate degree from the College of Physicians and Surgeons, New York, in 1888. In addition to his private practice, Dr. Cobb took an active interest in public health matters and served for 15 years as a member of the South Orange Board of Health.

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KLINE, William, a prominent physician of Phillipsburg, died suddenly at his home, 118 S. Main Street, on March 2, 1926. Dr. Kline had been suffering from the results of a fall sustained a week previously but his condition was not supposed to be serious in character. The unexpected fatal termination came in the form of a heart attack.

Dr. Kline, the son of William and Elizabeth Kline, was born in Harmony, Warren County, New Jersey, September 2, 1865. He was educated in the public schools and Easton Academy, graduating from the latter in 1885, and then entered Lafayette College for a two-year course. In the fall of 1888 he matriculated in the medical department of the University of Pennsylvania, graduating in 1891 with the degree of M.D. He located in Phillipsburg in 1893 and soon ranked as one of the most skilled physicians in Warren County.

Both socially and as a citizen he was highly esteemed and had always taken an interest in everything looking to the welfare of the community and the people. He held the office of City Physician in 1894-5 and served for 12 years in the town council. Dr. Kline was one of the pioneer workers for the establishment of Warren Hospital and labored long and faithfully with that institution, serving as Chief of the Medical Staff, and he served five years on the Board of Education, being president of the board the last year of his term. He was a member of the Warren County Medical Society, a thirty-second degree Mason, being member of the Shrine Crescent Temple, Trenton, N. J., and was a member of the First Presbyterian Church of Phillipsburg.

The deceased is survived by his wife, Caroline F. Kline, and by two daughters, Mrs. William H. Galbreath and Miss Mildred L. Kline.



## Medical Ethics

### ETHICS AND THE MEDICAL PROFESSION.

Richard C. Cabot, M.D., Boston, Mass.

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by permission.)

*Continued from April Journal.*

Yet silent example is not enough for the student of medicine. He wants precepts also, explanation after demonstration. And because universities still omit to put any teaching of medical ethics into the curriculum, the students plan ethical instruction on their own accord and call in speakers from outside. This has happened at Harvard every year in the last dozen or so, and I have no doubt it is the same at many other medical schools. The students really need it. For example, they are uncomfortably aware that they have been told nothing about medical fees or about any part of medical economics. Yet they know that very soon they will have to be earning their living and they wish to earn it honorably. They have heard about "fee splitting" (one of the commonest forms of medical graft) and gossiped about the exorbitant fees exacted from rich patients. They have also heard that the doctor is expected to treat a good many patients for nothing or for merely a nominal fee. They have heard medical partnerships extolled and denounced and they wonder why. "Contract practice" they hear described as a heinous crime. Yet how it differs from any other work done under contract and why a contract should be honorable in all other fields but disgraceful in medicine, they do not understand (which is natural enough because no one else has ever yet penetrated this mystery of medical phraseology).

Again medical students have had occasion to watch but never to discuss the contrast between the outstanding integrity of the medical teacher in certain difficult medical situations and his readiness to lie on other occasions.

Moreover they want to know about *euthanasia*, that ancient and reliable novelty, that dependable stimulant of readers' interest in the news of the day, the shopworn discussion which the newspapers trick out afresh each year in August when politics are dull and there is dearth of copy.

Students want to hear the pros and cons on the ethics of birth control, of state medicine, of abortion, of the use of bread pills, of medical advertising, of proper and improper technic in medical competition and in many other matters.

But since the medical faculty in its wisdom provides not an hour of instruction in medical ethics, all these problems have to be compressed into a few hours of volunteer lecturing arranged for by the students themselves on one of their free afternoons, when they ought to be getting some much needed outdoor exercise.

Yet though as a profession medicine is so extraordinarily reticent about ethics, it has been (so far as I know) the first professional body to formulate its traditions of correct professional behavior, the first to write a code of ethics and to acknowledge allegiance to an oath—the ancient Hippocratic oath. In the United States the code of medical ethics was drawn up by a committee of the American Medical Association in 1847 and revised in 1912. Most of the ethical codes of the various trades and professions have come considerably later, as I shall show in another article.

The Hippocratic oath dates from the time of the founder of medicine 400 years before Christ. It is a curious mixture of sound sense, valid for all time, and of pledges which have no application to modern medicine. In it the doctor promises that he will not operate on anyone for stone in the bladder but "will give way to those who work at this practice"—a form of trade unionism not popular among physicians today. But he also promises that "Whatsoever, in my practice or not in my practice, I shall see or hear amid the lives of men which ought not to be noised abroad, as to this I will keep silence." One wishes that such an antigossip rule were in force today. Physicians do not, as a rule, take this oath today but they are in strong sympathy with the spirit of many of its clauses and not infrequently devise more modern pledges for medical neophytes in the effort to christen their early work with the solemnity of an oath.

For example: At the University of Michigan—said to be the original from which Sinclair Lewis sketched the medical school in *Arrowsmith*—a body of students and graduates desiring to raise the ethical and scientific standards of the school, organized not many years ago the Alpha Omega Alpha society. The three Greek letters in its name are the initials of Greek words meaning "Fit to serve the suffering."

Last April (1925) in the course of an impressive address with which one of its student members prefaced the administration of the oath to 5 newly admitted students, at Ann Arbor, I heard the following words:

Our Society exists to advance professional ideals among medical students. Your selection (as members) is symbolic to you and to fellow students of the true ideals of the medical profession. These ideals are:

First of all, moral character must be above

reproach; no one is fit to practice medicine of whom this is not true....The state and private philanthropy has expended money upon training not in order that you may yourselves selfishly profit, but in order that you may serve your day and generation in a highly difficult and responsible profession. It is yours to give to your patients the very best of which you are capable. We are confident that you will be guided by this ideal of service. Otherwise you would not have been chosen.

Readers must realize that these words were spoken by a medical student to his fellow medical students at a private dinner of their club, with no thought of general effect and with none of the official temptation to "talk big" to one's pupils.

At this point I saw 5 young medical students stand up, side by side at their places at the dinner table. Facing them the speaker continued:

These are the guiding principles of the medical profession to which we ask you to give assent as members of Alpha Omega Alpha. I therefore demand of you whether you give your assent to these ideals of your chosen profession.

Space compels me to omit part of what he said, but it was all of a piece with my quotations.

In an impressive silence, the boys answered—not theoretically or self-consciously, but quietly and clearly:

We do.

Do you promise hereafter to use your utmost efforts not only to attain these ideals in your own life, but also to maintain and advance them in the profession at large?

We do.

Do you agree to support the Constitution of Alpha Omega Alpha and to aid in every honorable way to enlarge its usefulness?

We do.

In the name of the Alpha Omega Alpha of Michigan, I formally declare that you are entitled to the privilege of full membership in the society.

Each of the 5 then received the official badge and certificate, after which I was called upon—profoundly impressed by what I had seen and heard—to say what seemed appropriate.

Here, then, is another example of how the ethical idealism of the medical student, in the absence of any efforts on the part of his teachers, breaks out and asserts itself. It is characteristic, not of course of all students in all American medical schools, but of a large and influential section in the better institutions.

It is interesting to see the differences between the code of ethics adopted by the American Medical Association in 1847 and the revised form issued in 1912.

(1) They should study (says the 1847 code) in their department . . . . *to unite condescension with authority* (italics mine).

In the 1912 code they have ceased to condescend, but in 1847, one was forced to do so because "reasonable indulgences should be granted to the mental imbecility and caprices

of the sick". However much the modern physician may *think* this of his patients, he will not say it, even in his code.

(2) Another change in the 1912 code reminds me of some earlier ethical battles with medical colleagues. This concerns the matter of professional secrets which was touched upon in the Hippocratic oath. There the physician swears not to gossip about his patients or to pass along to others the knowledge which he may have about the seamier sides of their lives. In the 1847 code we find:

None of the privacies of personal and domestic life, no infirmity of disposition or flaw of character observed during professional attendance should ever be divulged by (the physician) except when he is imperatively required to do so . . . . Professional men have, under certain circumstances, been protected in their observance of secrecy by courts of justice.

But how far does professional secrecy go?

Suppose a young man is found by his physician to have syphilis and despite this fact, to be approaching his wedding day, his fiancée and her family knowing nothing of his condition. Is the physician bound by professional secrecy to allow this man to marry a woman who knows nothing of his condition and probably to infect her with a serious disease?

Twenty years ago many of my colleagues said "yes" and were indignant with those of us who said "no". Indeed, a fair case can be made out for the affirmative. The patient has given his physician the facts because he trusted the physician to preserve a professional secret. If all honorable and skillful physicians were known to be ready to betray such a secret, patients might shun such physicians and be drawn into the hands of quacks and shysters.

Nevertheless, I believe today the great majority of physicians would say to such a man: "Put off your marriage until you are cured or at any rate non-contagious. Otherwise, either you or I will tell your fiancée." Few physicians would stand by and see an innocent woman suffer such a punishment as would follow if his advice was disregarded. And today much fewer men would think of treating any woman in so dastardly a way.

This change in public sentiment is reflected in the 1912 code which enjoins physicians to preserve their patient's confidence as a trust, but adds:

There are occasions, however, when a physician must determine whether or not his duty to society requires him to take definite action to protect a healthy individual from being infected.

Note that it is still left an open question, and that still no duty to the "healthy individual" is recognized—only the duty to society. But in practice these two duties would usually prove to be one.

Of course no one is likely to suppose that



the writing or signing of a code of ethics secures obedience to it. The code is of interest chiefly because it shows what a fairly representative section of medical men think ought to be the behavior of all physicians. What the writers of the code consider important enough to mention and what they leave out, either as unimportant or as too obvious to need mention, are matters of some interest.

As in most other codes of ethics, question of etiquette and of professional custom take precedence over questions of right and wrong. What is seemly, what is good form, what is convenient for the smooth movement of daily work, what can be counted on to minimize friction and to keep the peace in the relations of doctor to doctor and doctor to patient, fill most of the code. For example, newspaper advertising of his powers by a physician is contrary to medical ethics. But no one would contend, I suppose, that it was in itself morally wrong. Medical men have explicitly or tacitly agreed not to do it. Hence, anyone who does it is going against the corporate opinion and the usual practice of his group. That is all.

(To be continued.)

## Esthetics

### RECORD OF A TRIP TO ALASKA.

Lancelot Ely, M.D., Somerville, N. J.

Several weeks of fires raging in the beautiful forests of Washington, formed a dense blanket of smoke over Seattle and vicinity, and, as we were approaching, completely hid from us the beauties of Puget Sound, Mt. Rainier and the Olympian Mountains. It was on August 1, 1925, that we sailed from Seattle, "The Gateway to Alaska", on the S. S. "Yukon" of the Alaska Steamship Co., bound for Seward. Our steamer was very commodious, with good room for promenading on each deck, and comfortable space for steamer chairs. The staterooms were cozy, and the dining room well appointed and inviting 3 times a day. Most of the passengers were, like ourselves, pleasure bent. There were many from California, Washington and Oregon taking the trip for a summer's vacation, some others were going up to visit friends, or for a month or more fishing and hunting, and some were going back after a short visit "outside".

Our second day out, the smoky atmosphere cleared and we could watch and enjoy the distant mountains and forest-covered shore line. We travelled through British waters for the best part of 3 days; American boats do not stop at any of the Canadian ports and we went about 500 miles before making our first stop. The weather was fine, the water smooth, and

the route, the "inside passage", most picturesque. It winds in and out among the thousands of islands that dot the coast of south-eastern and south-western Alaska all the way to the Aleutian Islands, on the west, with very few places exposing the steamer to the open waters and cold winds of the northern Pacific. The route is even yet poorly charted and until quite recently has been considered a dangerous one. Now, there are lights and buoys, especially in south-eastern Alaska, making the trip a reasonably safe one. The course is so tortuous that the tall and snowcapped mountains would appear first ahead then at the side and again at the rear of the boat as it made the many turns in the channel.

We were all anxious to reach Alaskan territory but as we approached the town of Ketchikan, our first stop, we were somewhat dismayed, for the docks, built on pilings, were much in need of repair and the water was very dirty with waste from the canneries that line the shore. Once on shore, however, the unpleasant approach was forgotten, and we found much to interest and please us. We first noticed the roads, which are made of heavy planks built up on pilings, and the houses, built in tiers along the steep hillside, with long flights of steps leading up from the highways. The business section parallels the docks, and many of the buildings are supported over the water on pilings. The stores are up-to-date, splendid markets of fruits and vegetables which are brought in from the States, and souvenir stores are filled with attractive objects for the tourist. Autos are used in the town almost entirely, as horses are too noisy on the plank roads, and splinter the wood, but there are very few miles of roadway, and none outside of town suitable for automobiling. The homes are very cozy and well cared for, and the residents take pride in their small gardens of shrubbery and flowers, and an occasional vegetable garden. The soil is shallow on the hillsides, and rocky, and often precious soil is carried for a long distance to make these gardens.

It rained in Ketchikan while we were there, as it rains most of the time; an annual precipitation of 13 feet. It does not seem to be a wetting rain, but more like a heavy mist, and no one stays home because of the rain. A resident was asked by a tourist if it rained every day in Ketchikan. The reply was—"I really cannot say, for I have lived here only 15 years, but it has rained every day since I have been here."

A mountain stream with beautiful cascades flowed through the town and, in season, the salmon may be seen by the thousands, a pink and silver mass, going upstream to spawn. The stream, which has its source in the snow

capped mountains back of the town, supplies power for electricity as well as water for town use. There are sanitary drinking fountains at all the main corners.

Leaving Ketchikan, we continued in our narrow course, the rocks and forests and distant mountains constituting an ever-changing panorama. It was along this route that my attention was first called to little shrines hidden along the water's edge, and several totem poles nearby, marking places sacred to the Indians of the past.

We arrived at Wrangle, our second port, late in the afternoon of August 3. Here we saw many totem poles, one large one greeting us at the very entrance to the town, and several along the main street. These Indian totems are neither tombstones nor idols, but are the tribal crests or coats of arms, and tell to one who can read them, the family history and ancestry of the residents within, for they are generally placed in front of the door. They are as proudly displayed as are the emblems of heraldry of the European nobility. We visited the burial place of old Chief Shake, and his lodging house where the family and tribal totems are all preserved in the original. We were entertained by Rev. Phillips who has made a study of the Indian and written considerably of Indian lore and totems in Alaska. He took us through his little Episcopal Church and showed us the altar of Alaskan marble, and then showed us his flower garden with its beautiful pansies, and dahlias large as dinner plates. Here also we enjoyed some freshly picked raspberries, large, rich, and juicy. From the small Indian boys at the dock, the souvenir collector may purchase the native garnets; of interest because they are distinctly local, but do not lend themselves to polish as they are too soft and full of flaws.

It was clear moonlight from a full moon as we left Wrangle, and many of the passengers staid up late into the night to enjoy the scenery as we passed through Wrangle Narrows, a passage so narrow that it can be entered only at high tide, and with expert manipulation, by the bigger steamers.

We stopped at Juneau, the capitol of Alaska, where we saw the first evidence of extensive gold mining. The Alaska-Juneau Gold Mining Company has large buildings and modern machinery for operations along the hillside above the town. Across the waterway from Juneau is the deserted town of Douglas, where in the years of prosperity much gold was mined; now, the buildings are abandoned and decaying. The Government buildings and prosperous homes of Juneau are very beautiful, with green lawns and flowers everywhere. A very fine museum displays in pleasing manner the wonders of Alaska, curios

of the earliest Indian history as well as of the Russian occupation; minerals, furs, and wild life arranged most attractively, and the whole in charge of a Russian priest who is very glad to explain or to listen.

Over a well-built road, we were taken to see our first Alaskan glacier, Mendenhall, a mass of ice 14 miles long and  $1\frac{3}{4}$  miles wide, with many grottoes and caves in the green and blue ice. This glacier is rapidly receding and great masses of alluvial deposit are left in its old path. On the drive out from Juneau, we saw several good looking farms and an active dairy with sleek looking cattle, a greater evidence of prosperous agriculture than we saw anywhere else in Alaska, as there is little of the coast land adapted to farming.

After leaving Juneau, we made our first cannery stop. There was nothing here but the cannery, and it was typical of many we were to visit before we reached Seward. They are usually located in a sheltered cove or bay, and built over the water and along the shore. There is one large building for the canning of the fish, and one or two others for storage. Just back from these buildings, and often along the hillside, are built one or two large dormitories for the imported helpers and a few shacks for the natives. A small store for general supplies completes the settlement. There are no roads leading to or from the canneries, all communication being by water. The business of the Alaskan canneries is enormous, some of the larger ones covering several acres and canning millions of cans of fish in an ordinary year and freezing hundreds of thousands of pounds for market use. When the fish are brought in by the boatloads, and dumped out by the thousands, still alive and flopping, they are hardly dead before they are started into "the Iron Chink", a machine which cleans each fish, cutting off head, tails and fins and cleaning out the inside within the time of a watch tick. This work was formerly done by Chinese, hence the name "Iron Chink". This machine will clean 30,000 fish in 10 hours, replacing about 50 of the most expert men. A chopper automatically cuts the fish into pieces of the right size for the cans, each can getting its share of several parts of the fish. Just the required number of ounces goes into each can, and as they move onward, an automatic weigher drops out any that are underweight. The cans are covered by machinery and carried to a furnace or exhaust box where the temperature is  $220^{\circ}$ , then the tops are tightened and sealed, and they are cooked in large retorts for an hour and a half at a temperature of  $254^{\circ}$ . Then, each can is labeled and packed away for shipment. The method of fishing, and kinds of salmon caught, are all under Government control.

After leaving south-eastern Alaska, we en-



tered the open ocean passing over Queen Charlotte Sound. It was the fifth of August, a beautiful clear morning. As we came on deck after breakfast, and looked shoreward, along the horizon we saw what appeared to be banks of silver clouds, the sun just rising behind them, and tinting them beautiful opalescent shades. Looking longer, we realized they were not clouds, but distant snow-capped mountains—Mt. St. Elias, Mt. Cook, and Mt. Logan; the first named being 18,000 feet high. The sight was most magnificent, a memory of which will stay with us forever.

We reached Cordova the next day, and from there went inland for 50 miles over the Copper River Railway, which was built at such great expense and peril, and presented so many engineering difficulties. We saw the "Million Dollar Bridge" made famous by Rex Beach in *The Iron Trail*. Here were the great glaciers he describes—the Miles and the Childs. Miles Glacier is receding and losing its activity; Child's is still active, presenting its face to the Copper River,  $1\frac{1}{4}$  miles of beautiful, glistening, clean ice extending back 40 miles into the mountains. Between fighting the active mosquitoes and watching tons of ice falling with a thunderous roar into the river, we spent a thrilling 2 hours. The next day, our steamer went out of its regular course to bring us in front of the great Columbia Glacier, which is very active, dropping icebergs into the water constantly. Our ship maneuvered up very near to the great ice wall which is about 500 feet high and 3 miles wide. All shades of green and blue were in this wall of ice. There was a constantly repeated roar of falling ice, a splash, and a boiling noise as the bergs came to the surface again. It was here we were introduced to the Alaskan strawberry, the Captain bringing a large dish of luscious ones, big, red and juicy, and telling us he had just picked them off the glacier. The fascination was so great we forgot we were freezing from the cold wind blowing over this vast ice field, and regretted the signal to the engineer for the ship to pull away.

We made a short stop at LaTouche, a big copper mining port, then on, passing Cape St. Elias, a massive rocky promontory jutting out into the sea, the gateway to Resurrection Bay, on which Seward is located. This point is also called "the sailors' grave-yard", as many a ship has been wrecked in the treacherous rocks. Now there is a warning buoy, which automatically wails a dismal note sounding like the ghosts of lost souls lying beneath.

We reached Seward in the early evening of Saturday, the eighth day from Seattle, and far enough west to be 3 hours different in time. We said good-bye to several of our passengers who were making the loop trip inland to Fairbanks by train and by auto down to Cordova,

where they would catch the next steamer a week later. At this point we became "round trippers" and using the boat as our Hotel, returned with it southward. One of the passengers whom it was our privilege to know well was Dr. Georgeson, who is in charge of the U. S. Agricultural Experiment Station at Sitka. He has lived in Alaska for 35 years, and is enthusiastic over the possibilities of Alaskan agriculture.

Sunday was rainy again. We went to Sunday school and church at the Methodist Church, a small but active organization. In the choir of young girls, we were interested to see one an Indian. In all the windows of the church and across the altar were potted plants; I counted 27, and 21 were in full bloom. We roamed over the town and outside at our will, were allowed to pick flowers and big red strawberries from one garden; visited a silver-fox farm, and a kennel of Alaskan huskies. We regretted having to leave Seward, after 2 days of real enjoyment.

On our return trip, we stopped at more canneries, to take on loaded cases of salmon, and at each of the ports that we had touched on our way north. Passengers were taken on at each stop, many of them cannery helpers as it was the end of the salmon season. We met many prospectors and gold miners, and looked with interest, and perhaps some envy, at the nuggets they were bringing out.

Back again to the States, after this 18 days of pleasure in Alaskan territory. There is a "lure" to Alaska, and it must be indulged. Sometime, we hope to return, to go inland and down to Nome, spend the winter among the ice and snow fields, watching the ice freeze and again break up on the big Yukon, and becoming real "sourdoughs".

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## Medical Economics

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### MORE ANENT SPECIALIZING.

Last month in this column attention was invited to certain discords between the general practitioner and the specialist. In particular, attention was directed to the relations between the family and the city specialist in consultation practice.

Among other points of maladjustment is the case of the specialist in general surgery. He exists in almost every community large enough to have a hospital. He is a necessity, for neither the hospital, nor the public, nor the general medical man could get along without him. For the greater part he is a man who has started in general practice in the same town, and has turned his attention to surgery through natural aptitude, or an ambition to excel in a chosen field; sometimes through local neces-

sity, or from a desire for the larger financial rewards of the surgeon. These are the ingredients, mixed in varying proportion, which determine the careers of most surgeons.

The great fault of this group of specialists is their failure, as a group, to limit themselves to their specialty. They combine too much medical work with their surgical practice; too much either for their own good or for that of the community they serve.

Some of the reason for this is apparent enough if one will pause to analyze the early career of the surgeon. He has, as a rule, had his start in the community as a general practitioner, and built up a successful practice. Having had in his hospital interne years some training and experience in major surgery, he performs an amputation or appendectomy now and then, as occasion offers amongst his own clientele. His hospital experience warrants his doing the less complicated major operations, and such being the case he feels that the financial advantage may as well be his as another's. As time passes, operations increase in number, his interest grows, the idea of becoming a surgeon is implanted, and he proceeds to develop himself in that direction. He begins to study surgical and regional anatomy in his spare moments, reads the special journals, and spends his vacations at various clinics; perhaps he stays a few months in residence at some one of them which offers facilities for intensive postgraduate training.

At last he feels himself ready to take up surgical work as a specialty, and makes more or less formal announcement of that fact to his colleagues. Meantime, however, with the passing years, financial obligations have increased. There is the mortgage on the lately purchased home, a growing family to be clothed and sent to school, social responsibilities that are widening; and altogether outlay has increased *pari passu* with income, and the bank reserve is still small.

Now, he realizes, is the time to cut himself adrift from general practice; but can he afford to do it completely? Can he forego a large part of the income so derived, face a few lean years with all the retrenchment they signify, and quietly await the development of his surgery till that has established him on a good financial basis? That is the difficult question, and to most men it seems easier to cling, for the time being at least, to the more lucrative part of their practice, and allow it to tide them over till such time as their chosen work has reached proportions which will justify giving it entire time and attention. This would seem for many the necessary and wise answer.

So far then, so good. Too often, however, difficulty presently begins, for though his sur-

gical work grows, our specialist never quite breaks himself of the habit of caring for medical cases, particularly those who can see him at his office. Not unjustifiably this annoys his medical confrères, who soon begin to feel that, if they are to refer surgical work to him, he should play fair and keep hands off medical cases. They complain too commonly that patients are sent to him for surgery and are permitted to return later for purely medical ailments. In such circumstance, it is a just criticism that the specialist fails to specialize.

The adoption of such a course is not universal by any means, nor on the other hand is it unheard of; indeed, the complaint of it is rather loud from time to time. That it is a poor plan is obvious from several viewpoints which the man who desires to be a surgeon should consider squarely. First, it is unfair to his brother practitioners who do no surgery. It is not "playing the game". Then it is unfair to the surgeon himself, for it interferes with his own proper development as a surgeon. It is a rare man who can practice both *good* surgery and *good* medicine at the same time. Every medical case he treats involves him in a waste of precious time that were better spent perfecting his surgical knowledge and skill. Finally, it is unfair to the community in which he lives, especially to that part of it with which he comes in contact, because, under the exigencies and stress of active general practice, few men have the ability, or can find the time to develop the skill in any special branch requisite to its first class practice. Thus the community has, instead of the surgeon of true first-class, to which it is entitled and which his native ability and aptitude fits him to be, a surgeon distinctly second rate, combined with a practitioner of medicine of mediocre quality, addicted to the casual care of medical cases and to unskilled surgery. There is in this all too common situation a fundamental lack of vision, lack of courage, and a failure of the spirit of fair play and coöperation necessary to the highest type of public service.

A specialist's success is largely predicated on his ability to gain *and hold* the confidence of his professional confrères; and this confidence will be founded on their various estimates of his skill, knowledge, and reputation for fair dealing. Surgeons may be heard now and then all unconsciously admitting this want of their fellows' confidence in them, when they complain that it is impossible to practice a pure specialty in their community because the doctors are too jealous to send them work. In its practical application the Golden Rule works two ways, and is dependent upon the ease of reversibility of its receiving and sending components.



# Current Events.

## VISITING NURSE PROBLEMS IN MORRIS COUNTY.

George H. Lathrope, M.D.,

Secretary, Morris County Medical Society.

As the problems of the Visiting Nurse are common to almost every community throughout the State, and are closely allied to medical affairs wherever they arise, it may prove helpful to other communities to relate the discussion of and solutions for some of these questions which have been reached during this past Winter in Morris County. Coöperation between the physicians and nursing association had long been felt to be inadequate, especially by the nurses, who were convinced that they could work to better advantage if they had some method of placing their problems before the doctors, and of securing their advice and help. A joint meeting was therefore called of the Executive Committee of the County Medical Society and representatives of several of the Visiting Nurse Associations of the county. The transactions of this meeting are given below, and an account of the effort to work out the problems presented. It may be added that the way has thus been opened for a much closer coöperation in the future between the Nursing Associations and the doctors of the community, and this should be, it seems, in the long run highly beneficial to the public, both lay and professional.

This meeting was held in Morristown on January 14, 1926. It was initiated by the Morristown Visiting Nurse Association and invitations to attend and share in the discussions were sent to all the Visiting Nurse organizations of the county; 4 of the 6 organizations in the county sent representatives to the meeting; 5 out of 8 members of the Executive Committee attended; Doctor Glazebrook, President of the County Medical Society, presided.

Seven matters of interest were brought up for discussion.

(1) The first question raised was that of "Standing Orders" for nurses making their first visit to patients not yet seen by a physician. It was explained that nurses not infrequently saw cases before the physician did, despite the fact that a call to any case should ordinarily come from or through a doctor. Where there is a maternity case, sick infant, or febrile patient, it seemed that certain things might be done by the nurse to avoid loss of time and effort, if some standing orders recognized by the doctors were available. A committee was appointed to draw up a set of such orders.

(2) The Nursing Associations asked for ways and means for an annual health examination of such of their workers as might desire it. It was agreed that they should get up a blank form for the examination, and that each nurse desiring it might apply to a physician to be appointed each year in the various communities by the Executive Committee of the County Medical Society. The arrangement of this blank form was referred to the committee appointed to draw up the "Standing Orders".

(3) The nurses reported difficulty in getting in touch with, and securing action from, the proper civil and police authorities in cases where they met infractions of the law and local Board of Health rules.

It was suggested, following considerable discussion, that such matters might be reported

in writing to the President or Secretary of the County Society who would then coöperate with the V. N. A. in securing attention of the proper authorities.

(4) The nurses stated that calls for treatment often came direct from patients, and that they felt it would be better if, wherever possible, calls on the Visiting Nurse might come through a physician. This would save time in beginning treatment and promote generally better coöperation between physician and nurse.

(5) The question was raised as to how the Visiting Nurse was to decide on the suitability of any given patient, whom she was sending to clinic or hospital, for free treatment. One of the nurses asked if it would be considered advisable to have a fixed standard of income relative to the number of dependents in a family. Discussion of this matter resulted in the suggestion that all cases should be decided according to the best judgment of the nurse at the time; that in sending them in she should report them in the hospital or clinic as free or pay patients; that if she was in doubt, she should report the fact of her doubt to the clinic authorities and leave it to them for final determination.

(6) Should the Visiting Nurse care for contagious cases? Two organizations reported that their local doctors had ruled against their visiting this type of case. The other 2 organizations stated that they regularly looked after contagious diseases, but that in so doing the nurses were careful to make these visits at the end of their daily rounds. The nursing representatives voiced an unanimous opinion that this is an important field for the Visiting Nurse—from the standpoint both of prevention and of education. The physicians agreed that this was legitimate and valuable work, and that with proper precautions on the part of the nurse, no risk need be incurred to other patients. They further stated that the matter would be presented to the county society for discussion, along with the "Standing Orders".

(7) The matter of fees charged by the Visiting Nurse was the final subject of discussion.

Two organizations reported that they had a flat charge of \$1.00 per visit, which was never exceeded, and only a fraction or none of which was received or asked for in many cases. Two others reported that in certain selected cases they doubled their fees.

It was pointed out that the actual cost per visit to the V. N. A. in Morristown had been reckoned and that it was over \$1.00; that thus the organization did all of its work at a loss; further, that while there was no desire on the part of the V. N. A. to be commercial, or to enter into active competition with private nurses doing hourly nursing, the demand was frequently more than the private nurses could meet, and that therefore many calls were answered by the V. N. A. from patients well able to pay a private nurse. A graduated scale was therefore suggested based on 3 classes:

(a) The regular fee for hourly nursing, applicable to all patients able to pay a private nurse; were one available.

(b) Cost price.

(c) Less than cost—any sum the patient could afford, or nothing at all.

After considerable discussion this plan was approved and it was decided to submit it to the County Medical Society for approval.

Following this meeting the matters discussed were brought up at a subsequent Executive Committee meeting and then at the regular quarterly meeting of the County Medical Society, March

9, 1926, Standing orders for nurses were determined as follows:

### Standing Orders for Nurses.

To be used on first visit when no orders have been given.

For all New Patients: Cleansing bath, T. P. R. Instruction in hygiene of sick-room with special emphasis on ventilation, cleanliness and diet suited to patient's conditions and needs.

For Patients with Fever, Undiagnosed: Liquid diet. Low S. S. enema when no abdominal pain or tenderness. Sponge for temperature. Isolate if any sign of communicable disease.

For Infants with Fever, Diarrhea or Convulsion: Normal salt solution irrigation, P. R. N. Diet, boiled water.

For Convulsions: Hot mustard bath (1 tablespoonful mustard to 1 gallon water) for 5 minutes. Cold cloths to head.

Burns: Remove clothing unless adherent to skin. Apply warm normal salt solution compresses. Remove patient to hospital if severe and physician cannot be reached.

Minor Dressings: Cuts, bruises, infected fingers, scratches—Cleanse with hot boric or saline solution and apply wet dressing. If patient has had dressing done by physician do not remove without orders from physician.

Discharging Ears: Cleanse outer ear with warm boric solution. Do not irrigate without an order. Emphasize need of medical attention.

Sore Throat: Liquid diet. Isolate if possible until physician sees patient.

Symptoms of Respiratory Diseases: General care. Advise good ventilation. Teach isolation and care of nasal and mouth discharges. Avoid exposure to cold. Liquid diet. Low S. S. enema P. R. N.

For Infectious Diseases: Isolate, and same treatment as for respiratory cases.

### Maternity Cases:

**For Mothers—Antepartum:** Cleansing bath. Local cleansing with soap and water followed with lysol solution. Low S. S. enema S. O. S.

**Postpartum:** Cleansing bath. Local cleansing with lysol solution. Abdominal and breast binders, P. R. N. Low S. S. enema P. R. N.

**For the Baby:** Daily bath. Cord dressing changed P. R. N. Cleanse eyes and mouth with boiled water or boric solution. Cleanse skin around umbilicus with alcohol and apply boric powder. Advise 3 hour feedings unless otherwise ordered. Soap suppository P. R. N.

The society voted its approval of the plan and further that each Visiting Nurse Association might present the matter to the physicians in their towns for final approval, having the backing of the County Society as a whole.

Relative to question No. 7, a letter was received and read from the President of the Morristown V. N. A., stating that they had decided on a schedule of fees, on the basis of the discussion originated by them at the joint meeting reported above, and asking for official approval of the County Medical Society.

This suggested schedule was as follows:

	Addit'nal Chge.	
	Outside	Morrist'n.
(a) To patients who could have employed a private nurse, had one been available .....	\$2.00	\$1.00

(b) To patients who wish to pay cost .....	1.10	.25
(c) To patients who cannot pay full costs.....	Any proportion thereof or service free.	

This letter stated that the cost price had been reckoned according to the Metropolitan Life Insurance Company's scale; and further that as this would probably increase the income of the V. N. A. their call on the Community Chest of Morris County would be correspondingly less. It emphasized the fact that the bulk of the V. N. A. work and their chief interest would always be with the third class of patients (c); that the second class (b) would comprise a moderate amount of work on which there would be no loss; while the smallest group (a) would yield some definite income.

This schedule was unanimously approved by the County Medical Society.

### THE SPREAD OF COMMUNICABLE DISEASES BY COMMON EATING UTENSILS TO BE STOPPED.

Henry B. Costill, M.D., Director,  
New Jersey State Department of Health.

The danger of the spread of communicable diseases through the common drinking cup and roller towel long ago prompted the passage of State laws prohibiting the use of these age-old public nuisances. The common drinking cup and the roller towel did not disappear simply as the result of the enactment of these laws, but undoubtedly attempts at law enforcement have been of educational value and have resulted in the elimination of many of these sources of the spread of communicable disease. The conditions which make the drinking cup and the towel potential vectors of communicable diseases apply equally to soiled cooking and eating utensils, the danger which heretofore has been ignored by State laws and regulations.

It is known that diphtheria, scarlet fever, and similar diseases may be transmitted from mouth to mouth by infected drinking glasses and eating utensils, and undoubtedly common colds, pneumonia, and influenza are spread in the same manner. Although it is difficult to prove definitely the transmission of diseases by common eating and drinking utensils used in restaurants, soda fountains, and other places where food and drink is prepared and sold for human consumption, the State Department of Health, realizing the potential danger to public health, has taken the first step toward closing this avenue for the spread of communicable diseases. The State law gives to the State Department of Health the authority to make rules for the protection of foods and beverages, and under the provisions of this act the State Department of Health at its last regular meeting adopted the following regulation:

"All hotels, restaurants, cafes, soda fountains, and other places where food is produced, manufactured, stored, cooked, prepared, distributed, and sold, or intended for sale for human consumption, shall be provided with adequate facilities for the treatment of cooking and eating utensils by boiling water, or steam under pressure, or by other means which shall yield the same results; and all utensils intended for a second use, including pots, pans, dishes, plates, cups, saucers, glasses, and other containers repeatedly used for food, and all knives, forks, and food implements shall be subjected to treatment with boiling



water, or steam under pressure, for at least three minutes after each service, or by such other method that effective sterilization of each article shall be properly carried out between each use. Where sufficient or adequate sterilizing equipment has not been or cannot be installed as above specified, sanitary single-service receptacles (paper cups and utensils) which are to be thrown away after being used may be adopted and used in whole or in part as a service."

As local health departments have power to enforce regulations of the State Department of Health, it becomes their duty to require restaurants and soda fountains to be equipped with facilities for the proper sterilization of drinking glasses and eating utensils and to see that this disinfection is carried out satisfactorily. Common decency dictates that eating utensils be cleaned before each usage, and the protection of public health requires sterilization of utensils. The enforcement of this regulation should be a long step forward in the prevention of the spread of many communicable diseases.

Practicing physicians who are health board members, and other physicians as well, will have many opportunities to further this program so important from the esthetic and sanitary standpoints.

#### OPPORTUNITY FOR YOUNG PHYSICIANS.

The Editor has recently received 2 interesting communications bearing upon the demand for additional country practitioners, and in both instances recommending what appear to be good openings for earnest young physicians. New Jersey ought not to suffer to any great extent from the general complaint of less well settled portions of the country, that professional men tend to congregate in the cities and to leave the country districts deserted, because no part of this state is very far remote from the larger centers of population. It appears, however, that there are places within the state inadequately supplied with physicians at present and which offer promising fields for the up-building of a lucrative practice as well as for the pursuit of a satisfying professional career.

The April issue of the Journal carried an announcement of the death of Dr. William J. Burd, of Belvidere, and we are informed that the passing away of this distinguished member of the profession leaves a vacancy that needs to be filled. Belvidere is a town of approximately 2000 inhabitants and the center of a prosperous farming and industrial district. There are none too many physicians in Warren County and additions to the group have not kept pace in recent years with the losses by death, so that this would seem to be an opportunity for some young man desirous of establishing a comfortable country town practice.

From White House-Lebanon, Hunterdon County, comes another appeal for help. The appellant states that "within a radius of 10 miles we have only one doctor, who would be mighty glad to have another physician come in here and share the work". The district referred to has a population of approximately 1500 in the towns and a prosperous surrounding farming section, the population of which we cannot estimate.

Both communications are respectfully offered for the consideration of physicians seeking or willing to enter upon practice in the country and the Editor will be very glad to put interested parties in communication with persons who know local conditions in each district.

## Communications.

### RESPONSE OF THE MORRIS COUNTY MEDICAL SOCIETY TO THE TRUSTEES' LETTER.

Morristown, March 25, 1926.

Dear Dr. Hunter:

Replying to your letter of February 22, 1926, in which you circularized the Presidents and Secretaries of the County Medical Societies of the state regarding the question or reorganization of the Board of Trustees of the State Society, permit me herewith to inform you of the action taken after due discussion by the Morris County Component Society.

On two (at least) previous occasions this question had been discussed at regular meetings of the society. On receipt of your letter the Executive Committee again went over the matter and reported to the society at its regular quarterly meeting held at Dover, March 9, 1926.

The feeling which obtains in our organization is that the Trustees, having a combined Senatorial and Cabinet function, should exhibit a more representative and state-wide composition than at present; the House of Delegates remaining the body which represents the Society from a numerical point of view, the Trustees being the Senatorial Chambers, so to speak.

As the State Society is conducted at present, the small counties have little or no authoritative representation anywhere in the organization; several of them have had as their sole representation for many years, but a few delegates in the House, where their voice and influence are entirely lost, except when asked to come into "combines" with other County Societies and resort to what is felt to be objectionable political jockeying.

We feel that the Board of Trustees should properly be representative of the entire state, and that it can be so not only without any detriment to the activities of the Society, but to its distinct advantage. This is suggested with entire respect to the honesty of purpose of the Fellows, and due regard to their conduct of affairs throughout the past.

We therefore report the following result of the vote taken upon your three questions:

(1) "Are you satisfied with existing conditions as to the constitutional provisions for organization of the Board of Trustees?"

Vote: a unanimous "NO".

(2) "Do you wish to make any change in the construction of the Board or in the manner of its election or appointment?"

Vote: a unanimous "YES".

(3) "If you desire a change, will you please indicate which of the 3 plans hereinbefore described would be preferable, or will you submit some other plan?" It was unanimously voted to offer the following plan: That the Board of Trustees of the State Society shall consist of 28 members, seven to be the officers of the Society ex-officio, viz: the President, the three Vice-Presidents, the Treasurer, the Corresponding Secretary, and the Recording Secretary, and 21 to be chosen, one from each County Society in the State; that the 21 representatives of the several County Societies shall be chosen for a term of 3 years each, as follows: The 21 counties to be divided alphabetically into 3 groups of 7 each, designated as Groups A, B, and C, respectively. The first representative chosen from each county in Group "A" to serve for 3 years; from each Group "B" County for 2 years; and from each Group "C"

County for 1 year. Thereafter the representatives chosen from each of the 21 counties to serve for a term of 3 years.

We feel that this would make for a real representative upper body, and would be a great boon to the small counties, where the interest in the State Society has been waning for a long time. This plan does not of course preclude the election of any Fellow as the representative of his county, which would very naturally tend to happen, but the counties would have the right to select whomever they regarded as the best man for the task.

If it meets with your approval, we should like to send copies of this letter to the various County Societies of the state.

Very truly yours,

George H. Lathrope, M.D.,  
Secretary.

**LETTER TO THE BOARD OF TRUSTEES,  
FROM DR. PHILIP MARVEL, OF  
ATLANTIC CITY.**

Kenilworth Inn, Biltmore, N. C.,  
February 26, 1926.

Dear Dr. Hunter:

A copy of your communication from the Trustees to the Presidents and Secretaries of the various County Societies has been remailed to me here by Miss Wolf, my secretary. I have been much interested in reading the same, and would have been greatly interested in the meeting of the Board of Trustees which took action thereon had it been possible for me to have been present; however, I think they have taken the wisest course possible. If we can only manage to interest the majority of the County Societies sufficiently to have the members think and coöperate, to think from a collective as well as from an individual point of view, we shall have an honest and interesting expression which, while it may differ from our conclusions, at least will show a reason for its existence.

In attempting to discuss the subjects presented in your communication, let me preface my remarks by saying that I am going to accept the matter from the basis that the best of motives are behind each presentation, and try to analyze said presentations from the standpoint of their merits.

First. The sole reason given for the suggested constitutional change in membership of the divisional bodies of our State Society is a plea to place the same on a more "democratic basis". The inference implied is that the Board of Trustees, as constituted now, is a close corporation. My personal knowledge of the Board of Trustees is at variance with such opinion; certainly the fact is far from being established.

Second. Each Fellow embraced in the membership of the Board of Trustees as now constituted has by virtue of office been eliminated from any incentive to connive or be other than democratic in his relations to the vital questions and interests of the State Medical Society. Therefore, it would seem that Dr. Quigley's proposed constitutional amendment has grown out of a misunderstanding or at least a misconception of the actual facts in the situation, and because of its unfavorable standing with relation to the facts, it should not be supported.

As to the action of the Board of Trustees in supporting either Dr. Eagleton's resolution or Dr. Morrison's substitute amendment therefore let us be sure to keep in mind that the Board of Trustees has no power to legislate except as members

of the House of Delegates. We cannot ignore the fact that the charter—not the constitution—distinctly defines the office of Past Presidents; hence, unless we cancel our New Jersey State Medical Society's charter, any variance from its declarations is likely to upset and lead the Society into untold difficulties. It would therefore seem out of place in our present position to encourage either Eagleton's or Morrison's amendments; in both we are confronted with constitutional power which is overshadowed by charter authority. Hence the situation would seem impossible of clarification from action along this line, unless a membership affirmative vote could be obtained without a dissenting voice.

The above are some of the reasons that make me hesitate to recommend any of them. Therefore, I cannot say that I am in consonance with the recommendation of your honorable committee.

1. (a) I believe changes can and should be made in our present Constitution and By-laws.

2. (b) It is questionable whether the State institution of the Board of Trustees can be changed by constitutional legislation, without first amending or revoking our charter.

3. (c) The same argument maintains against Dr. Morrison's substitute offered at the meeting of the Board of Trustees as against Eagleton's resolution.

If full affirmative consent can be had by our membership body to amend our Constitution and By-laws to the end that we reorganize our House of Delegates under the charter granted the State Medical Society by the A. M. A., which was liberalized, by sanction at least, to admit the State Medical Society of New Jersey, allowing it to hold on to its former charter as one of the composite state associations making up the National Association, thereby making our House of Delegates strictly the legislative body in the Society, I take it that it will not be difficult to reorganize the working methods of our State Society so that each body politic in the Society shall have definitely defined its duties and limitations and many of our present differences will have ceased. The executive body should be this in fact rather than by inference, and the judiciary power should be the Judiciary and Court of Appeals for questions arising in the various component societies. The operations and privileges of the Scientific Committee should be so arranged and divided as to in no way conflict with, or be limited by the requirements of the executive, legislative or judicial bodies, in so far as relates to their distinctive privileges and duties. The legislative power of the Medical Society of the State of New Jersey should rest in the House of Delegates and to this body should be reported all of the activities and results which strictly belong to the material interests of the Society. When thus introduced in the House of Delegates, all matters of important interest should first be referred to a Reference Committee for study and then reported back for subsequent action by the House of Delegates.

In my judgment, what our Society most needs is segregation into the proper divisions for the various matters under discussion and consideration, the duty of each division being prescribed and limited, and the Society's encouragement back of a wholesome clarification of the duties of each and every officer and committee.

If our Constitution and By-laws are revised along this or some similar line, believing as I do the motive behind the restless discontent of which we are all aware and which appears to be the fruits of disentanglements growing out of misinterpretations and misunderstandings, the result



will tend to prevent further confusion and difference of opinion—I believe we shall be well out of the mire.

If we can only get together with the one purpose of obtaining the greatest good for the Medical Society, rather than for any member or class of members, I am hopeful of an early establishment of a harmony which will protect us against differences or factions. This accomplished, we shall have much upon which to congratulate ourselves and the Society.

Sincerely yours,

Philip Marvel.

**A VISIT TO THE CLINIC OF DR. W. WAYNE BABCOCK, CHIEF SURGEON OF THE SAMARITAN HOSPITAL, PHILADELPHIA, PA.**

(Letter from John Hammond Bradshaw, M.D., F.A.C.S., Orange, N. J.)

The Samaritan Hospital of Philadelphia has a bed capacity for about 250 patients. To me, the most unique feature aside from its chief surgeon, Dr. Babcock, is its dark operating room. I may not have been observant but in the several hospitals in many different cities of the world that I have visited I never before saw an operating room without sky-light or windows, the dark effect being enhanced by the flooring and dark green tiling of the walls. The operators in this room are better and better pleased with it as time goes by, claiming that with their fine central light focused only upon the operating table they work with less exhaustion and with the iris dilated, thus suffering less from eye-strain. They even claim the vision is better. The nurses, too, are enthusiastic, as they claim that they can work longer hours with less tire. For any preparatory treatment or cleansing of the room it can be flooded instantly with light almost similar to daylight. The operating-table nurse has her own effective light during the performance of the operation. This room, moreover, can accommodate about 100 students in the gallery.

Dr. Babcock looks about 35 years old but this is the only thing about him that is deceiving.

The first thing that pleased me was a set of rules posted in the doctors' dressing room in the most conspicuous place and which might adorn with benefit any hospital of the land.

**Rules and Regulations of the Samaritan Hospital, Philadelphia, Pa.**

W. Wayne Babcock, Chief Surgeon.

(1) The time scheduled for operation means that the surgeon and his assistant should be in the operating room, **ready to operate** at that time. It does not mean the time of arrival of the surgeon at the hospital. If the surgeon is sufficiently late to overlap the operating time of the operator scheduled to follow him, he will not be permitted to proceed with his operation, but must have another time assigned to him by the chief resident physician.

(2) When a surgeon finds he is delayed in reaching the hospital he should telephone the chief resident physician in order that proper adjustment may be made in regard to his operation and not keep the operating suite personnel in suspense.

(3) In scheduling operations the assignments must be so adjusted that all operations will terminate not later than 5 p. m., unless in emergency.

(4) The surgeon is urged to operate upon pa-

tients in the order in which the operations have been scheduled, to avoid unnecessary chaos in the operating suite and on the floors.

(5) No smoking is permitted in the operating room suite except in the surgeons' private dressing room and the door must be kept closed. It is requested that lighted cigars or cigarettes and those that have "gone out" are not ever to be carried through the operating suite.

(6) Surgeons and their assistants are requested to deposit discarded operating gowns and towels **in the basket provided for this purpose.** They must not throw them on the floor.

By order of the Hospital Committee  
Superintendent.

The surgeon washes his hands and arms first at an ordinary operating room suite sink and then turns to a table above which are suspended in rows 4 large flasks, the contents of which can be decanted over his hands and arms into basins by simply working foot treadles. The first flask contains distilled water beneath which are brushes with the usual lime and carbonate of soda outfit. After a vigorous scrub he next washes (with scrubs) with No. 2, which has a solution of boric acid and alcohol fifty-fifty. The next flask with a touch of his foot empties bichloride solution, 1:1000, upon his hands. The fourth flask contains 2% lysol solution. These flasks are decanted in the order named upon his hands before they are dried and during all this cleansing the hands and arms are never submerged in the solution but are doused so that there is no possibility of a claim that the antiseptic solutions are only germ soup. After the hands are dried with sterile towels they are carefully encased in dry sterilized rubber gloves.

The first operation I witnessed was an appendectomy, preparatory to which, while the patient was on the operating table, a high spinal injection of stovain was given. Immediately after this the patient was put in the usual supine position on the table and the iodine preparation of the skin was made. This iodine was not washed off with alcohol. The incision made was less than 2 in. long, absolutely transverse to the long axis of the body, beginning 1 in. above and 1 in. within the superior spinal crest. After the skin incision was made with the knife the McBurney blunt muscular separation technic with blunt scissors followed immediately. The presenting cecum was drawn carefully and gently out of the wound, bit by bit, not by the fingers but by smooth holding forceps. No gauze was allowed to enter the abdominal cavity and the gentlest retraction was made at the margin of the wound. The appendix was quickly delivered and ligated with chromic catgut at its base; it was approximately the size of one's little finger, and unruptured. Now please note this technic: The appendix was taken out of the wound by the ligating catgut and a number of artery forceps, each seizing a bit of the cecum in the exact site where one usually inserts one's purse string inversion suture. The appendix was next transgrasped tightly across at its base by a clamp and a second clamp transclamped it one-quarter of an inch above the first. It was next severed by the cherry-red hot electric cautery knife. A clean cautery severed stump now presented, held by its ligature and the artery clips on the cecum. The interesting part of this technic was the passing of the ligature, that had already tied the appendix, around the artery clamps by one maneuver, thus perfectly and securely inverting the stump better than I have

ever seen done by the usual purse string suture, and also at a great saving of effort and time. The wound was closed in the usual way and the whole operation from beginning of the anesthesia to closing of the wound took exactly 11 minutes.

The second operation I witnessed was a gall-bladder case. Stovain was injected into the spine at the twelfth dorsal. The operation began immediately, thus taking only about 2 minutes for the complete anesthesia. A 5 in. straight incision was quickly made over the gall-bladder, seizing forceps grasping this viscus at its base, and it was drawn, together with the edge of the liver, out into easy accessibility. The cystic duct was traced and isolated from the surrounding parts almost to the gut and at once divided between holding clamps. It was then dissected from the liver, the fundus and body being yellowish in color and much thickened, presenting a neoplastic appearance, while the duct itself contained several stones. An interesting feature of this case was a considerable amount of pus that welled up from the proximal end of the stump of the duct and when the clamp was loosened over 5 c.c. of thick creamy pus was evacuated. A No. 11 rubber catheter was left in this duct and the wound closed in the usual way leaving 2 cigarette drains.

The third case was a recurrent carcinoma of the pylorus. The tumor was large enough to be visible on simple inspection even before operation. Now, anyone who has attacked malignant growths in the abdomen knows the difficulties likely to be encountered and the skill and courage demanded to perform such an operation at all, but the operation was made imperative by symptoms of obstruction. A perfect and painless narcosis was obtained by local novocain in large amount, Dr. Babcock using his self-feeding syringe and probably using almost a pint of the 1% solution of this drug. Observation of the blood pressure was made by the nurse every 5 minutes throughout the operation. When the blood pressure drops as low as 75, notice is taken of it and if it drops much lower transfusion by the syringe method is done at once and repeated when necessary.

The impression left upon my mind of Babcock's work is conveyed by the question I asked him upon leaving. I simply said, "Doctor do you never make a false move?"

## Lay Mirror Reflections.

### CONTROL OF DIPHTHERIA.

Since the beginning of this year the Medical Society of New York has been conducting an active campaign for the suppression or obliteration of diphtheria. Combining all of the various agencies having any interest in improvement of public health and securing the hearty coöperation of lay as well as professional organizations, the society is directing a movement that promises to have excellent results. The primary objective is to secure immunization of all children and young persons, and to this end every available opportunity is being utilized to teach the value of toxin-antitoxin administration to the most susceptible

element of the population. State and City Boards of Health are prepared to take care of those who cannot afford the attention of private physicians and the treatment is supplied without cost to the poor. At the same time, full attention is being paid to the necessity for disposing of all existing cases of the disease, and the profession is being urged to employ antitoxin in adequate dosage to promptly effect a cure.

State boundary lines, geographically speaking, play an unimportant rôle in the progress of an infectious disease; germs do not recognize such boundaries save in so far as they possibly encounter obstructive measures set up by competent health authorities. New York may succeed in removing this disease from her category of menacing dangers—removing it, that is, insofar as new cases arising within her own borders is concerned—and she will thus have reduced the possible spread of the affection to other parts of the country and will have protected herself and her neighbors to the extent to which she attains immunity for the mass of her people. Whatever proportion of susceptibles may be left, because of refusal to take immunization or because of failure to reach them, will still be possible subjects for infection and possible sources for spread of the disease. New York's protection, New Jersey's protection, Connecticut's protection, and the nation's protection against this disease would be immeasurably enhanced by the adoption and complete development of a similar campaign in the neighboring states mentioned.

This is a most commendable movement that New York physicians have started and it should be immediately taken up and industriously pushed by the profession and the people of New Jersey. Our State Board of Health has indicated an interest in the matter, it is believed that the State Board of Education will lend its aid, and our Committee on Public Hygiene and Sanitation is now considering the possibility of instituting such a campaign as has been referred to.

The responsibility of the individual practitioner in this matter is alluded to in the following editorial from the New York Sun, March 30, 1926:

#### FORTY-FOUR NEEDLESS DEATHS.

In January and February, according to a bulletin issued by the State Department of Health, forty-four children died of diphtheria in New York State outside New York City. The tragedy of it lies in the fact that everyone of those deaths was preventable.

Only eight or nine of the victims were seen by physicians on the first day of illness. "In all except a few cases", says the bulletin, "failure by the parents to call a physician early may be considered a chief reason for the ensuing deaths, for we know from accumulated medical experience that if antitoxin is properly administered in suffi-



cient dosage on the first day of the disease recovery nearly always takes place."

Parental responsibility did not begin with that fatal delay on the first day of seizure. It really began long before when, through ignorance or negligence, parents failed to see that their children had the advance protection of toxin-antitoxin treatment. That treatment is simple, harmless and inexpensive, and it is an almost certain preventive of the disease.

In many of the cases the physicians themselves must share the responsibility. In ten cases there was delay in administering antitoxin; in two this was due to the fact that the doctors awaited reports on culture examinations. The best modern practice does not warrant such waiting but insists that antitoxin be administered immediately when diphtheria is suspected.

In nine cases antitoxin was administered subcutaneously, a method now commended only when antitoxin is used for prophylaxis. When actual presence of the disease is known or suspected the accepted practice is to give antitoxin either intravenously or intramuscularly.

In seven cases antitoxin was administered in insufficient dosage. "It is far better", says the bulletin, "to give too much antitoxin at the first dose than to run the risk of not giving enough and of feeling constrained to give more on another day when it may be too late to be of any material benefit."

For more than thirty years medical science has had at its disposal a positive cure for diphtheria and for ten years it has had an almost infallible preventive. And yet, hundreds and even thousands of children in all parts of the country die of diphtheria every year! It is incredible—it is preposterous—but unhappily it is so!

The public needs to be educated as to its own responsibility in this matter. The word that diphtheria is preventable by a simple precautionary measure and curable if taken in time and treated properly should be spread until it has reached every ear. But, as Dr. Shirley Wilmott Wynne, director of the Bureau of Hospitals, said some weeks ago, the chief responsibility must rest upon the medical profession, because it has both the knowledge and the means of prevention.

### QUACKS AND EPIDEMICS.

Apropos of recent efforts on the part of various "cultists" to secure legislation conferring upon unqualified persons the legal right to practice the healing art, and for the benefit of physicians who sometimes find it difficult to present a simple, logical explanation of their reasons for opposing licensure of incompetent practitioners, we quote the following editorial from the New York Times of April 2, 1926:

Present-day civilization is in sharp contrast to the past in freedom from frequent and devastating epidemics. Medicine has much to learn. But the great epidemics are checked; plague which reduced London to a village in the time of Defoe is restricted to a narrow area in the tropics. Only the oldest men living can remember yellow fever in New York, and the smallpox which nearly annihilated the early Massachusetts colony is so little feared that people debate the need of vaccination.

Yet every case of scarlet fever or diphtheria or measles has epidemic potentialities just so long as it is unrecognized for what it is. The most perfect of Health Boards is powerless until

its functions are set in motion by the family physician. Protection from contagious disease presumes the ability to recognize contagious disease. If the physician whose aid is sought be ignorant or a quack, the whole community is endangered through his failure to make a correct diagnosis. This is the basic reason for the state's interest in the qualifications for the practice of medicine. Protection of the ignorant from exploitation is of but secondary importance; the credulous will ever find means for their own undoing. Outside the realm of communicable disease the average man has little concern with the medical fads of his neighbor. If he have lumbago, he may go to a Turkish bath, or to a psychoanalyst, or to a physician, and it is no one's business but his own. Yet if his child have diphtheria, it is the vital concern of the whole neighborhood that other children be kept out of the house. But diagnosis of diphtheria is a matter of medical education. It is not inherited nor acquired by occult means. The state doubts the ability of uneducated men who have taken a few lectures, or a correspondence course, when it comes to the public question of recognizing cases of communicable disease.

There is now under discussion in the State Legislature a medical practice act designed to protect the public. If it becomes a law, it probably will make it difficult for some inspired geniuses of a new "science" to make a living. Some misguided grateful patients are loud in praise of these new sciences. Probably they have cured, or the patients have got well while taking treatments—which isn't the same thing, though many think so. But the concern of the public is not whether an excess of huckleberry pie is best cured by adjusting the fourteenth dorsal vertebra, or by a dose of castor oil; its concern is whether Dr. Quack, the renowned healer, knows a case of measles when he sees it. And health officers are just now warning us of the danger of an epidemic of measles.

### ANENT SPECIALISM.

Not infrequently our comic journals take a fling at the foibles of the learned professions and, naturally, the physician comes in for a share in such jokes. The prevalent belief that specialists have inordinately increased in numbers, that the human body has been classified and apportioned into too many specialties, and that the trend is toward a dearth of "family doctors", has afforded one distinguished humorist an opportunity to publish an amusing skit, which we reproduce, hoping that we possess sufficient of the "sense of humor" to enjoy a joke upon ourselves.

**Specialists, Specialists Everywhere, But Not a Doctor in Sight.**

By Don Herold.

(Reprinted by courtesy of Judge.)

Who remembers when we used to call a doctor in case of sickness?

Nowadays, we have to be mighty delicate about that. We might get an inch over the boundary line and call a doctor for the wrong organ. Lots of people just die now rather than try to decide which specialist to summon.

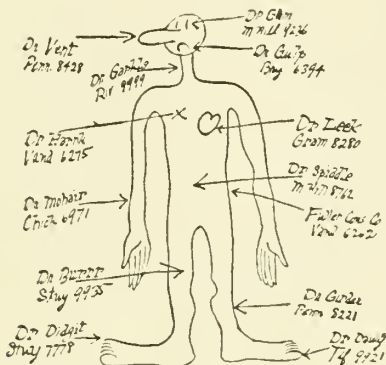
In the big cities, at any rate, there is nobody to come and see us when we are just sick. We have to know exactly where we are sick and what ails us.

Half the time we are sick in between organs, so there is nobody in town to cover the situation. The only thing to do is to wait until the disease shifts to some part of our anatomy covered by a specialist of whom we happen to know.

What is needed is a medical brokerage service. When theatres became so numerous in New York, for example, that it was impossible to run around to all of them to decide what show to see, ticket agencies naturally sprung up where you could stand in front of a counter and get a seat for any show in town. We need McBrides and Tysons for the medical profession. We need medical brokers who will send us where we belong.

Once there used to be a few accepted kinds of specialists—ear, nose and throat men, for instance. Why, gosh, a man who covers the ear, nose and throat today is almost a general practitioner. There are now twenty-seven kinds of nose doctors alone. A man can now devote his whole life to the outside of the inside ear.

Back in Bloomfield the same doctor used to bring us and bury us. Here in New York, the



Suggestion for "Who to Call" chart to hang near telephone in the home.

obstetrician gives us a slap and a promise and turns us over to the pediatrician. There is a new doctor down the line every fifteen or twenty minutes from the cradle to the grave. People are not only chopped up into sections geographically but chronologically.

A liver man will not even listen to young lungs. A heart man does not care how you are—all he knows about is hearts. And practically none of the new-fashioned doctors cares how you feel.

Let us pray that this intense specialization does not spread to other fields. It may be well and good to peddle a stomachache all over Manhattan before finding a buyer, but may we be spared from dragging a motor car all over the city to find "the right man".

"Oh, no, we don't touch that. You will have to take your car to a rear axle specialist. We concentrate on those teeny weeny little wires in your spark plugs. And for that hoarseness in your klaxon you should see Croupem, the horn man."

#### Different.

She—"Once you called me the light of your life."

He—"Yes, but you go out too much now."—The Redhead.

## Observations from the Lighthouse.

### INTRACRANIAL HEMORRHAGE IN THE NEW-BORN.

Of equal interest to the obstetrician, the pediatrician and the neurosurgeon, and apparently puzzling to all alike, is the subject of intracranial hemorrhage in the new-born. Although there is general agreement among writers on this subject that early recognition and appropriate treatment of the condition would undoubtedly do much to reduce the large group of physically impaired and mentally retarded children, opinion as to diagnostic and therapeutic procedures has not altogether crystallized.

A most valuable contribution to the literature is made by William Sharpe and A. S. MacLaire (J. A. M. A., 86:332, Jan. 30, 1926) in the report on a total series of 500 new-born infants on whom lumbar puncture was performed 12 to 48 hours after birth. Intracranial hemorrhage of varying degree was disclosed in 45, or 9% of these. Acute signs were usually lacking; when present, they were often meager. Large intracranial hemorrhage was frequently indicated by stupor, respiratory difficulties, refusal to nurse, and muscular twitchings extending to convulsive seizure (diagnosis being confirmed at necropsy). In milder cases, where the amount of hemorrhage could be entirely absorbed, the acute signs, if any, were so temporary as to be quickly forgotten. In cases where the hemorrhage did not cause death, but was too large to be absorbed, the infants apparently recovered in 2 to 4 weeks, but between the seventh and twelfth month would show signs of retarded development.

Results in this series indicated that infants most liable to this complication were first born full term males, delivered after difficult labors, in which forceps were used as a last resort, medium forceps or breech extraction. These authors believe that lumbar puncture as an early diagnostic method, when the hemorrhage is still in fluid form, and as a therapeutic means of spinal and cranial drainage, is a simple and safe procedure in the absence of severe shock. They note the fact that the blood-clotting time was within normal limits for all the infants exhibiting free blood in the cerebrospinal fluid; it was prolonged in only 6 cases of the series, and in each of these the spinal fluid was clear. The fact that in this series of cases the blood-clotting time was taken within 48 hours after birth—and it has been observed that even in hemorrhagic disease in the new-born the blood-clotting time may be within normal limits until the third day after birth, when it becomes lengthened—may account for the low incidence of a prolonged clotting time in this series. Besides, the bleeding time may be lengthened and yet the clotting time be within normal limits, the former condition being the more important and serious factor in case of intracranial hemorrhage.

In discussing this report, J. E. DeLee emphasized the point that cerebral damage occurs not alone in hard forceps, version and extraction deliveries but that prolonged natural labor is also a most potent cause. The condition suggested to him certain traumatisms that produce caisson disease. The child during labor is under pressure and has also suffered from a slight degree of asphyxia similar to that of caisson workers. When the head is born, that member is relieved of pressure, but the body continues under pressure and, as a result, the blood is forced into the brain with



increased power, causing hemorrhage of varying degree. The pressure effects exerted by pituitary extract increase the chronic asphyxia natural to labor, bringing about acute asphyxia. It is noteworthy that hemorrhagic diathesis of the newborn is almost unknown in infants delivered by cesarean section.

DeLee said further that in considering avoidance of this traumatism, it must be recognized that the uterine muscle is strong enough to fracture the skull and arms, and to produce such increased abdominal tension as to provoke hemorrhages in the peritoneum and liver. A mild reduction in the power of the uterine contractions can be effected by anesthetics—scopolamin-morphin, Gwathmey's synergistic method, or morphin alone. In view of these facts, DeLee urges relief of pain, especially in the first stage of labor, and prevention of damage in the second stage, by proper intervention before asphyxia of the child or injury to its delicate structures has taken place.

### STUDY OF SPINAL FLUID.

From the standpoint of the pediatrician. M. Hines Roberts (J. A. M. A., 85:501, Aug. 15, 1925) carried out a study of the spinal fluid, normal as well as pathologic, on 423 infants in the Grady Hospital for negro patients. The primary object was to investigate intracranial hemorrhage in the new-born, and to determine, if possible, the true significance of this condition. The majority of punctures were performed within 24 hours after birth; on many of these patients a subsequent puncture was done on the ninth day and in a few cases again as late as the fourth week. A one-inch, 20 gage needle was employed for lumbar puncture. For withdrawing blood from the longitudinal sinus a sharp  $\frac{3}{4}$  inch, short-beveled, 20 gage needle was inserted in the middle of the posterior angle of the fontanel. Blood in the spinal fluid as withdrawn may arise from 2 sources: (1) from some pathologic process that has taken place within, or (2) from trauma produced by the needle at the point of puncture. In distinguishing one type from the other, Roberts says it will be recognized that blood from trauma invariably streaks the spinal fluid, while that from a pathologic process renders the fluid uniformly bloody. Another important point of differentiation he notes is that blood from trauma usually clears, while that due to pathology persists. In this work the presence of macroscopic blood in the spinal fluid not resulting from trauma was considered as evidence of intracranial hemorrhage. Of the 423 infants examined, 60 or 14.1%, exhibited this condition. Only 2 of these cases could be definitely classified as true hemorrhagic disease of the new-born, as evidenced by prolonged coagulation times of 11 and 13 minutes, respectively. The remaining 58 must be attributed to trauma during the course of delivery, although 46 deliveries were described as normal. In no case was pituitary extract given until the third stage of labor. Prematurity seemed to be a definite etologic factor. Only 26 of the 60 cases presented symptoms attributable to intracranial hemorrhage. Of the 55 children who have been followed for periods varying from 2 to 19 months, 12 are dead—10 because of hemorrhage and 2 from some intercurrent infection. Of the 42 who are alive, only 2 show symptoms due to hemorrhage; the rest seem normal.

In discussing this report, John Lovett Morse brought out the fact that cerebral hemorrhage of the new-born is from the pia and arachnoid, not from the dura, as in adults; the dura in in-

fants is adherent to the bone. He believes, moreover, that many of the paralyzes seen in children are due to injury of the spinal cord rather than to hemorrhage into the brain. S. J. Wilson called attention to the fact that absence of blood from the spinal fluid does not exclude hemorrhage.

### LUMBAR PUNCTURE.

Roberts disposes of the subject of treatment of intracranial hemorrhage by observing that he is not certain of the real benefit resulting from spinal drainage as employed by himself. Clifford C. Grulee, however, does not hesitate to say (J. A. M. A., 85:337, Aug. 1, 1925) that he considers lumbar puncture, both from a diagnostic and therapeutic standpoint, highly inadvisable. "It has been shown by Schwartz", he says, "that within 24 hours after these hemorrhages occur, there is distinct destruction of nervous tissue and that this destruction extends but slightly after that caused by the initial hemorrhage. . . . If we may judge of the effects on the brain from the effects on the retina, as shown by the recent findings of Jacobs, where there was very evident recovery from multiple hemorrhages in the retina without disturbances of vision, we might suspect that such hemorrhages, too, occur on the surface of the brain". As for the argument that the presence of hemorrhage means death or mental deficiency and that radical measures are justified on this basis, Grulee advances 2 points to be considered: (1) While many assume that the brain defect is the result of hemorrhage, few have suggested that hemorrhage may be favored by an existent brain defect; (2) experience has not justified such a bad prognosis.

Lumbar puncture, according to this author, has certain definite disadvantages: (1) the procedure necessitates holding the child in such a position as to produce venous congestion in the cranial cavity, which of course favors further hemorrhage; (2) the technical difficulty involved in lumbar puncture at this age (especially in consideration of the fact that so many of these cases occur in premature infants) is such as to make the findings questionable; (3) the small size of the spinal canal, and especially of the posterior foramina, together with the richness of the venous plexus and the richness of the blood supply to the vertebrae, render the presence of blood in the spinal fluid of extremely doubtful diagnostic value in determining the presence of intracranial hemorrhage. Even were these technical difficulties obviated, Grulee would still regard lumbar puncture as of more than doubtful therapeutic value. "In the first place", he says, "if there is a large amount of blood within the canal, its removal may simply effect a renewed hemorrhage; and if the hemorrhage has lasted 25 hours, the damage is already done and lumbar puncture will do practically nothing to relieve it". He therefore believes that in the present state of uncertainty the best treatment for intracranial hemorrhage is absolute quiet and rest; that the measures up to the present time adopted for the relief of the condition are satisfactory neither from the theoretical nor from the practical standpoint; that the damage is done before the measures can be of value, and that as a consequence, the best plan to be followed is to see that nothing is done to disturb the quiet of the infant.

J. B. Sidney, discussing Grulee's paper, expressed the opinion that although complete rest and quiet might be good for an infant with symptoms of intracranial hemorrhage, the patient was better off if 1 to 3 ounces of fluid could be withdrawn from the spinal canal. He stated that trans-

fusion would stop the hemorrhage and intramuscular injection of whole blood would stop the condition from progressing. Jules M. Brady advocated cistern puncture. Effa V. Davis held that the prevention of oversized infants would check the tendency to serious trauma of the cerebral vessels; also that control of diet with regard to elimination of toxemia during pregnancy would render the blood vessels of the fetus more healthy and less liable to injury. Others who discussed Grulee's paper, while not convinced of the therapeutic value of lumbar puncture, nevertheless expressed more or less unwillingness to adopt the policy of rest and nonintervention.

#### FROM THE OBSTETRICAL ASPECT.

M. L. Brandt (Med. Jour. & Record, N. Y., 121:521, May 6, 1925) writing of "Intracranial Hemorrhage in the New-Born, from the Obstetrician's Viewpoint," makes the following report: During 1924 there were born, in the Bronx, 15,160 babies. Of this number, 629, or 4.1%, were stillborn and 469, or 3.1%, died during the first month of life. Brandt says that intracranial lesions, mild and severe, develop in the course of both normal and abnormal labors. Evidence of such injuries can be discovered at necropsy in approximately one-half of all infants stillborn or dying within the first few days of life. But only in half of these cases was this injury the cause of death. In the other half traumatic lesions, chiefly tentorial lacerations without or with slight hemorrhage, represented but incidental findings.

J. Comby (Arch. de Méd. des Enfants, Paris, 28:638, Oct., 1925) favors lumbar puncture as a therapeutic measure. He believes that a lumbar puncture, soon after birth, is indicated in every new-born infant who has been exposed to injury to the cranial bones, or to any congenital infection or toxic action inducing fragility of the vessels. In cases with uncertain symptoms, the puncture may not only confirm the fact of a meningeal hemorrhage, but also contribute to recovery. He cites 13 cases of this kind, with recovery in 50%, under repeated lumbar puncture, followed by intraspinal injection of horse serum and subcutaneous injection of some bland hemostatic solution.

The importance of a differential diagnosis between hemorrhage resulting from birth injury and that caused by hemorrhagic diathesis, is urged by Harold O. Ruh and Justin A. Garvin (Ohio State Jour., 22:215). The fact that 2 types of hemorrhage occur during the new-born period has led to confusion in diagnosis and treatment, because in hemorrhagic disease, the administration of blood, whether by the intravenous, intraperitoneal, intramuscular, or subcutaneous route, is practically a specific, while in the other type the administration of blood is of no benefit. These authors believe that the importance of true hemorrhagic disease as an etiologic factor has been exaggerated. Most cases of hemorrhagic disease do not show brain hemorrhage and, conversely, a relatively small percentage of brain hemorrhage cases have a hemorrhagic diathesis. Tentorial and sinus tears with subsequent hemorrhage are frequently found at autopsy.

Several laboratory and clinical procedures offer aid in diagnosis. A coagulation time of over 8 minutes or a bleeding time of over 7 minutes is presumptive evidence of hemorrhagic disease of the new-born. If time permits, an examination for the various elements of coagulation in the blood, but mainly prothrombin, may give additional information. If lumbar puncture or puncture of the cisterna magna shows a spinal fluid pressure of over 10 m.m. of mercury, or if red

blood cells are found in the spinal fluid, a presumptive diagnosis of intracranial hemorrhage can be made.

In those cases proved to be hemorrhagic disease, the authors believe that whole blood from a suitable donor, administered intravenously, gives the most rapid and certain results. When bleeding time has returned to normal, measures should be taken to relieve pressure symptoms. If, however, the increased intracranial pressure be relieved before bleeding has stopped, further hemorrhage will result. The symptoms resulting from brain irritation (convulsions, clonic or tonic contractions, irritability and restlessness) are best controlled by the rectal administration of chloral hydrate in doses varying from 2 to 5 grains. The infant should be placed in a quiet, darkened room and moved as little as possible. Elevation of the head may be of some benefit. Owing to difficulty in feeding in these cases and to the danger of aspiration, gavage may be necessary. In cases of dehydration due to vomiting, saline or other subcutaneous infusions should be used early. Operation for relief of pressure or removal of the clot should be performed in those cases in which localization is possible and lumbar puncture has been unavailing. It is in the supratentorial subdural hemorrhages in the anterior fossa that operative measures are most successful, while lumbar puncture, by relieving pressure symptoms through drainage, is of greatest service when the bleeding is under the tentorium.

## In Lighter Vein

### How Time Drags!

An automobile proceeding at the snail's pace of fifteen miles an hour covers twenty-two feet every second. Yet in this space and time the average taxi-driver

Notes the traffic officer's signal  
Avoids a jay-walker  
Noses ahead of a mere flivver  
Grins and waves to an acquaintance  
Scrapes by a street car  
Bawls out the motorman  
Spots an opening ahead  
Casts critical glances on the wearers of short skirts

And is bored with the monotony of his job!

—Bill Sykes, in *Life*.

### Ex Cathedra.

A Bishop in India prided himself on saying the right and tactful word to every one he met, and by reason of his office he was not accustomed to find his remarks questioned.

"So strange I should run up against you, dear madam," he said, "because I was chatting only a few minutes since with your two dear children."

"Bishop," said the lady, "I have no children."  
"Are you sure?" he asked earnestly.—*Passing Show* (London), from "I Like to Remember," by W. Pett Ridge.

### What's Wrong With the Movies.

Movie-going Mother (to friend): Yeh, I stopped takin' the kids to the Rialto Theatre. Too many edjicational pictures!—*Saturday Evening Post*.

Tit for Tat.—"Why is mother rolling up her sleeves?"

"To punish Mame for rolling down her stockings."—*Boston Transcript*.



## County Society Reports.

### ATLANTIC COUNTY.

Joseph H. Marcus, M. D., Reporter.

The Atlantic County Medical Society meeting was held at the Chalfonte Hotel at 8:30 p. m., on the evening of April 9, 1926, being called to order by the President, Dr. D. Ward Scanlan. Applications were presented for admission to the Society, by Dr. Sidney E. Bateman and, as associate member, Dr. C. S. Steigerwaldt, D.D.S.

The Chairman of the Public Health and Welfare Committee reported that he had been instrumental in abating to a very great extent the nuisance of smoke caused by the burning of soft coal. The radio broadcasting is to be continued during the month of April and the speakers will be Dr. B. B. Filer, whose subject is to be "Teeth Infection Relating to Health", and Drs. Wm. E. Darnall and E. Z. Holt. Dr. Samuel Stern felicitated the society upon the occasion of Dr. W. E. Darnall's birthday.

The Scientific Program followed:

Samuel Stern, M.D., and William Miles, C.E., Atlantic City, "Report on the Cause of Uremia."

Dr. H. Rawle Geyelin, New York. "Some of the Results in a Six Year Study of the Causes and Therapeutic Effects of Certain Procedures on Epilepsy."

Dr. Charles P. Frazier, Philadelphia, "Pituitary Disorders".

Dr. Samuel Stern presented original researches into the cause of uremia, in the form of a preliminary report, following a resumé of his research work conducted with reference to nephritis, Dr. Stern and his co-worker felt that uremic coma or convulsions may be the first evidence of acute nephritis or it may be the terminal of a long standing unrecognized nephritis.

In concluding, he stated, "We believe our researches in chemistry offer an identification of the toxic element responsible for uremia and that in the cyanates; suggesting potassium cyanate, potassium-ammonia cyanate, and potassium sulphocyanate.

A study of the cyanates is now in order. Hydrocyanic acid is one of the most deadly poisons known and frequently is exceedingly rapid in its action; according to Christeson  $1\frac{1}{2}$  gr. of the anhydrous acid is capable of producing death in the human subject. Sometimes death occurs almost instantaneously. Usually 3 stages of the poisoning are manifest: (1) A very brief period of difficult respirations, low cardiac action and disturbed nervous action. (2) Violent convulsive stage with dilated pupils, vomiting, often loud cries, unconsciousness. (3) Closing period; asphyxia, collapse and paralysis, sometimes interrupted by convulsions. When smaller doses are injected the symptoms come on more slowly but are similar to those just described. A peculiar bloated look, deeply suffused face and neck with frothing at the mouth. Death is usually the result of asphyxia produced by a direct paralyzing action of the poison upon the respiratory center; the poison also appears to have a direct action upon the heart.

This is the exact picture we see in uremia. Were we to be given this description of symptoms for a diagnosis would we not all of us first

think of uremia. But, this is not the only evidence we present, chemistry aids us.

It has long been suspected that urea is the dominating factor in Bright's and no urinalysis is considered complete without a report upon the percentage of urea. Here we will note that urea and the cyanates are isomeric, or identical in their atomic weights. This is of the highest importance as evidence to sustain our claim.

Can the cyanates be recovered in the blood and urine? They can and we have recovered them in cases of Bright's disease. Here we will note that they appear more constant in acute states or in exacerbations of chronic ones. A word of caution as to the pit-falls in the diagnosis of uremia. It is often mistaken for the coma of acidosis either of the ketone group or aminocids (amminosis). Here it is worthy of note that the cyanates may be and often are combined with ketones. We refer to acetone, diacetic acid, butyric acids, etc., and we will also call attention to the fact that we have been finding an obscure acid rater constant in these cases. Its significance and separation we hope to be able to report later. There are many more problems involved but it is not within the province of a paper of this type to exhaustively discuss them, so they will be considered later.

Dr. Stern cautioned that one had best remember that chemistry and physiology are the dominant factors; that the typical pathology is but an end result to be disturbed or altered body chemistry; that chemistry or physiology is the sole guide in the study of body metabolism.

The program was continued by Dr. H. Rawle Geyelin, who presented a series of investigations conducted by him and his co-workers of the staff of the Presbyterian Hospital of New York City. In a very complete survey, the author recounted the various classifications of epilepsy, the causative factors and the various methods of treatment in this institution. The original work of Dr. Geyelin, comprised a series of 185 cases, of which 100 were studied in the hospital and 85 in the dispensary. Of this total number, 50% were under 15 years of age. Dr. Geyelin, by interpretation and schematic charts, marked the improvements resulting from a starvation diet with high ketonic producing diet, which he felt is the most successful therapeutic agent as yet. He concluded his presentation with a word of caution as to the results obtained by this method of treatment and also stating that this method of treatment in idiopathic epilepsy in adults is of little or no help.

The Scientific Program was concluded by Dr. Charles P. Frazier, of the University of Pennsylvania, his subject being "Pituitary Disorders." He presented a brief anatomic description of the pituitary body, which is divided into pars anterior and pars posterior. In a hyperactivity, gigantism is produced; in a hypo-activity, dwarfism is the resultant factor. Dr. Frazier classified the disturbances of the pituitary gland as follows:

(1) Pituitary dysfunction, in which the body function is disturbed and where there is no enlargement or tumor of the hypophysis demonstrable; an excessively fat child; the treatment of which condition is glandular.

(2) Supersellar lesions, in which tumors in the neighborhood of the gland cause symptoms by pressure.

(3) A class which takes its origin from the pharyngeal pouch. In children this condition

is easily recognized and it constitutes a cystic calcification.

(4) Primary pituitary lesions. This condition is of surgical interest and 80% of the cases are of the adenoma type.

Symptoms of pituitary lesions: (1) X-rays demonstrate changes in the conformation of the base of the skull. (2) Pressure on the optic tract brings about definite impairment of vision. There is no choked disc. In 50% of the cases there is present a temporal hemianopsia. (3) Glandular symptoms: (a) with involvement of the anterior part there is acromegaly, (b) while posterior lobe involvement presents Froelich's syndrome. (4) Pressure symptoms: Headache differs from all other types, is due to the extreme tension on the capsule, and is referred to the temporal region on both sides. (5) Neighborhood symptoms: The structures in the vicinity of the gland may be interfered with.

Treatment: The management of disturbance of the pituitary body depends upon the causation and may be glandular feeding alone or in combination with thyroid, use of x-ray, or surgical intervention. Dr. Frazier presented a brief historic dissertation on surgical intervention, stating that the first operation was performed in Vienna, at the University Hospital in 1912. Dr. Frazier advocated the trans-sphenoidal method in operation on primary tumors of the pituitary. This presentation of Dr. Frazier's was concluded with a lantern slide demonstration in which he presented a picturization of glandular disturbances both clinically and anatomically.

Among the members participating in the discussions were Drs. Clarence Andrews, P. Marvel, Jr., S. Bateman, D. Ward Scanlan, D. Miller, H. Rawle Geyelin, and Charles P. Frazier.

#### Atlantic City Hospital Staff.

Joseph H. Marcus, M.D., Secretary.

The stated monthly meeting of the Atlantic City Hospital Staff was held at the Breakers Hotel on the evening of March 19, 1926, at 8:30 p. m. The meeting was called to order by Dr. Richard Bew, president. The minutes of the previous meeting were read and approved.

Dr. Walt P. Conaway, as chairman of a special committee, presented permission blanks for operative or medical procedures to be signed upon the patient's admission to the hospital. These permission slips were passed upon by an attorney as embodying the necessary legal phraseology.

Dr. Theodore Senseman moved that only blank A be obligatory for ward patients and that slips B and C be used by physicians for private cases at his own discretion. This motion was unanimously approved by the members present. Following are copies of slips A, B and C:

#### Slip A.

Atlantic City Hospital,

Atlantic City, New Jersey.

Permission is hereby given for any operation upon ..... which may in the judgment of your surgeons seem best for h.....

Signature.

Relationship to patient.

#### Slip B.

Dr.....

I hereby authorize you to operate on..... for..... and for any other condition which, in your judgment, is deemed best for..... and I agree to pay for all services and expenses incident thereto.

Signed.....

#### Slip C.

Dr.....

I hereby authorize you to operate on me for..... and for any other condition which, in your judgment is deemed best for me. I agree to pay for all services and expenses thereto.

Signed.....

The secretary read the new Constitution and By-Laws which were approved and adopted. It was moved and seconded that this Constitution and By-Laws be printed in booklet form and distributed to all the members of the staff.

Dr. Theodore Senseman nominated the following physicians to the Honorary Staff: Doctors W. Blair Stewart, A. Burton Shimer, A. D. Cuskaden, P. Marvel, Sr., J. A. Joy, Wm. Sharpe and J. C. Marshall. It was unanimously decided that these physicians be recommended to the Board of Governors for election to the above-mentioned division of the General Staff.

The Scientific Program was instituted by Dr. Joseph H. Marcus, presenting, "Hypertrophic Pulmonary Osteo-Arthropathy". Following a bibliographic resumé of the literature referable to Marie's Disease, Dr. Marcus maintained that the grouping of causes presented by Teleky embodied an excellent classification as to etiology.

(1) Diseases characterized by purulent and gangrenous processes in the body, pulmonary tuberculosis with cavity formation; bronchiectasis, empyema, cystopyelonephritis and dysentery.

(2) Infectious diseases and chronic intoxications; pneumonia, pleurisy, syphilis and alcoholism.

(3) Cardiac disease; especially congenital.

(4) Malignant tumors; pulmonary sarcoma, pulmonary carcinoma, sarcoma of the parotid.

(5) Diseases of the nervous system; syringomyelia, neuritis.

Case report: Boy, N. C., age 4½ years, was admitted to the Betty Bacharach Home for Children with a history so vague that it was entirely ignored. The physical findings were as follows: A poorly nourished and underdeveloped boy unable to walk or sit up unsupported. The striking features that first drew one's attention were a distinct clubbing of the fingers and toes with an unusual flattening of the chest, that presented a groove at the base of the sternum in which one could easily place a walnut. The weight was 25 lbs.; pulse, 64 per minute, of good volume; irregular respirations, 30 a minute and of the abdominal type. The apex beat was situated in the fourth interspace 1½ in. within the nipple line. The circumference of the chest through the nipple level was 17 in. (normal at 4½ years is 21 inches). Expansion of the chest was exceedingly limited, the breath sounds being feeble and bronchial in quality. A few moist coarse râles were heard throughout the chest but more marked over the left chest, in the upper half. Dulness on percus-



sion was elicited over this area and on the right side there were a few areas of dull tympany probably due to fibrosis.

The abdomen, as well as the rest of the physical examination, was negative as to important findings. The laboratory investigation was conducted by Dr. R. A. Kilduffe, Director of the Atlantic City Hospital Laboratory. The blood Wassermann was negative. The blood examination showed: hemoglobin 85% color index, 9; erythrocytes 4,300,000; leukocytes 7300; polynuclears 44%, large lymphocytes 4%, small lymphocytes 55%, eosinophiles 5%, Truck's irritation cells 2%. The roentgenologic examination was of little aid, but demonstrated an increase in size of the peribronchial glands, more marked in the upper part of the left chest.

This case was under observation for several months during which time there has been a persistence of physical signs of consolidation as above mentioned. Careful and repeated examinations of the sputum for presence of tubercle bacilli, and the repeated tuberculin tests, resulted at all times in negative findings. These procedures and the stationary condition and persistence of physical signs, without accompanying symptoms, eliminated pulmonary tuberculosis; the resultant diagnosis being chronic pneumonia with a secondary hyperthropic osteo-arthritis.

Dr. Marcus believed that the pathologic changes were probably due to two elements: (a) chronic stasis or hyperemia due to mechanical interference with return circulation by the changes in the pulmonary tissue, and (b) the toxemia resulting from infection of the lungs. Most writers agree that the causative factor is the toxic or circulatory hypothesis, or a combination of the two. After studying the reasons for accepting these suppositions, Marcus inclined to acknowledge the solidity of Bamberger's words uttered 35 years ago—"The etiology in most cases is uncertain."

The Scientific Program was continued by Dr. Joseph Poland, who presented his Obstetrical Service Report extending from September 1, 1925, to January 1, 1926. The total number of cases delivered by Dr. Poland was 252, of which 189 were private cases and 63 public. The classification of sex showed 109 males and 143 females. Among the interesting data presented was the large percentage of babies born in the Atlantic City Hospital, as compared with the total number of deliveries in the city for the entire year; the total number of babies born in 1925 was 1080, of which 719 were born at the hospital. It is exceedingly complimentary to the institution and the members of the General Staff that approximately 70% of the entire births were cared for in the Atlantic City Hospital.

The concluding presentation of the Scientific Program was by Dr. P. H. Beppler, Resident Physician, his subject being "Dye Therapy". He presented a brief introductory dissertation on this subject. In part, he stated that a great many factors must be considered in estimating the value of dye therapy in septicemia. He felt it would be well to get clearly in mind the picture of septicemia, stating that it is difficult to give a definition of septicemia which is free from objections. Churchman describes the condition as one which arises when as a result of complications of focal infection, which itself may have produced severe symptoms, slight symptoms or none at all, the protective barrier between bacteria and host has broken down; organisms having therefore appeared in the blood the disease ceased to be local

and its gravity at once greatly increased. The focus of infection may be obvious or cryptic. It is a common belief that in septicemia the bacteria circulate continually in the blood stream, constantly reproducing, but this is not so; they are liberated from the focus at intervals. Some of them are destroyed by the blood, others are filtered out by lymph-glands and others lodge in the different organs of the body. If the focus is removed, the bacteria soon disappears from the blood stream provided no secondary foci have developed and the defense mechanism of the body is not broken down. The removal of an accessible focus removes the source of supply. The presence of bacteria in the blood stream is not in itself serious.

Another important matter is the character of the particular organisms which appear in the blood stream and the particular location of the primary focus. The condition of the patient as to his powers of resistance and defense must also be taken into consideration. No chemotherapeutic substance could be expected to save cases of septicemia in which the focus of infection is inaccessible, or in which complications have developed which might be fatal, or in which the patients powers of resistance have been so lowered by intoxication that recovery is hopeless, or in which the causative organism is of a very resistant type.

Gentian violet when injected intravenously disappears from the blood in less than 2 hours. It appears to enter into combination with the cells of certain organs in which it remains in some concentration for a considerable period of time and in successive doses becoming cumulative. It is possible in this manner, as in arsenphenamin therapy, that gentian violet has a much better chance of exerting its effects. The action is not bactericidal but bacteriostatic and elimination of bacteria from the blood stream depends on the action of the dye and also the defense mechanism of the host. At this point, he warned that gentian violet therapy is of value in only a selected group of cases and a great deal of care and precision must be taken in its use to get any result and do no harm.

Following were case reports of patients treated with dye therapy. The first, Gladys M., 14 years, chief complaint severe pain and swelling of the left leg and knee. She had tuberculosis with marked activity in the right upper lobe. Blood picture showed 3,640,000 erythrocytes, 15,300 leukocytes, 76% polynuclears. The blood culture showed a pure *Staphylococcus aureus*. The fluid aspirated from the knee joint showed the same organism. Gentian violet solution was given intravenously on 3 occasions and the patient was discharged after 2 months stay at the hospital. The blood culture was negative when discharged.

Ethel S., age 16, admitted to the hospital with complaint of pain over both mastoids and discharge from both ears. On admission, the temperature was 102°. Blood picture R. B. C. 3,650,000; Hb. 72; W. B. C. 13,700; Polys 84. A paracentesis of the right drum was done the next day; this gave the patient much relief but the temperature went to 104.6° where it stayed for 3 days. A blood culture was negative. Culture from right ear showed *Staphylococcus albus*. Spinal fluid pressure was normal. On the eighth day after admission, the temperature rose to 105.8°, and by the tenth day dropped to normal. Gentian violet, 20 c.c. of 1:200 solution was given intravenously, and the next day the temperature started again to rise. The patient's veins were

so small that we were unable to give more injections. On the thirteenth day, a simple mastoid operation was done on the right side. The temperature after this followed a very irregular course between normal and  $104^{\circ}$ . On the thirty-fifth day after admission, 21 days after mastoid operation, a secondary mastoid operation was done on the same side and the lateral sinus was opened. There was no thrombosis. Pus and necrotic bone were found and removed. The pus and culture growth of pneumococcus. The temperature was very irregular for about a week after this and then remained at normal till discharge. Patient made an apparent recovery. The interesting point in this case is that even when the temperature was as high as  $105^{\circ}$  the patient had no complaints; her appetite was fair and she apparently had no symptoms. There were no chills accompanying or preceding the sharp rise in temperature.

The third case was that of a boy, Joseph Branco, admitted Jan. 19, 1926, after an illness of about 2 weeks. His illness began with headache, pain and swelling on the left side of the face, submaxillary region and ear. Four days previous to admission, pus began to discharge from the left ear. Became very ill 2 days previous to admission and cried continuously, complaining of severe pain and headache and was very restless. On admission, the patient was apathetic, very restless and hypersensitive. He was unable to answer questions. The knee jerks were exaggerated. The left Babinsky was positive, the right negative. The pupils were about normal in size, the left slightly smaller and both reacted sluggishly to light. There was a profuse discharge of thick yellow pus from the left ear and considerable swelling of the left submaxillary and parotid region; the jaws were set. There were sharp elevations of temperature ranging from  $96.2^{\circ}$  to  $102.6^{\circ}$ ; the pulse varied from 100 to 140.

On the day of admission paracentesis of the left membrana tympani was done. The next day an abscess in the retropharyngeal region was opened and an enormous quantity of pus evacuated. Spinal drainage was done the day after admission and daily thereafter for 9 days. The first examination of spinal fluid was as follows: Marked increase in pressure, increase in the globulin content, decrease in sugar content; the fluid presented a very cloudy appearance, and contained 2450 cells. Culture of fluid showed *Staphylococcus aureus*. A spinal Wassermann was made. From day to day the fluid became more cloudy till finally it contained strings of pus. The cell counts of the spinal fluid were done with blood counting apparatus and were on the fourth day after admission 5600; fifth day 7150; sixth day 10,550.

On the second day after admission, 3 c.c. of 1:200 solution of mercurochrome in distilled water were given intravenously; the patient showed apparently no reaction. On the fourth day after admission, because of its selective action on Gram positive organisms, which were present in the case, it was decided to use gentian violet instead of mercurochrome, and 20 c.c. of 1:200 solution in distilled water were given intravenously. On the fifth day the dose was increased from 20 to 40 c.c. Apparently no change in the patient's conditions following either of these injections. The patient died on the tenth day.

Dr. Marcus's paper was discussed by Doctors W. J. Carrington, Clyde M. Fish, P. Marvel, Jr., H. I. Silvers, W. C. Wescott and R. A. Kilduffe.

Dr. W. J. Carrington related a similar case that he presented before the society and Dr. Clyde M. Fish, superintendent of the Pine Rest Sanatorium, maintained that there was a certain relation existing between hypertrophic pulmonary osteoarthropathy and tuberculosis. Dr. W. C. Wescott differentiated x-ray findings between acromegaly and Marie's Disease.

The discussion of dye therapy was opened by Dr. D. Ward Scanlan, his opening remarks being that this therapeutic procedure is a disputed question. As Dr. Scanlan will present a series of cases treated by dye therapy his discussion was held in abeyance until the following meeting.

Dr. C. H. de T. Shivers recounted a case of "Gonorrheal Arthritis", and a case of "Squamous Epithelioma of the Penis with Cellulitis", both of which were treated with mercurochrome, using 1% solution, 2 mg. per kilo.

Dr. Harold Davidson reported a series of cases of "Influenzal Bronchopneumonia treated by Dye Therapy". Further discussions were by Drs. H. I. Silvers, W. E. Darnell and E. C. Chew.

Dr. R. A. Kilduffe, Director of the Atlantic City Hospital Laboratories, presented a masterly dissertation on "Dye Therapy". In brief he cautioned the users of this method of therapy to bear in mind at all times the selective action of the various dyes and not to misinterpret the results of laboratory workers. He reviewed Churchman's researches and the end results as obtained by him. Dr. Kilduffe dwelt upon the selective action of gentian violet, which should be used for Gram positive bacteria, stating that bacterial death by injection of gentian violet is never produced, and that a bacterial agent must be in contact with the organisms for some time in order to produce death. He stated that mercurochrome was not originally introduced for use in the blood stream. Some of Dr. Kilduffe's conclusions were that in searching for clinical improvements, it always must be born in mind that dyes have a detrimental action on toxins; that one must make a careful systematized study of the infection, and that the most important fact in clinical results depends upon the bacteriostatic action of the dyes, which inhibit reproductive activity and biochemic stimulation; that the chances for recovery depend upon the virulency of the organisms, accessibility to the focus of infection, and resistance of the patient. He advocated the use of small repeated doses which should be the method of approach in all cases where dye therapy is used. One should bear in mind the cumulative effect of the dye and its possible effect upon the organism and, lastly, that future work will show not direct attack upon the organisms but placing the patient in a receptive physical attitude for controlling the infection.

#### BERGEN COUNTY.

H. B. Wolowitz, M.D., Reporter.

The Medical Society of Bergen County held its April meeting at the Holy Name Hospital, Teaneck, New Jersey, April 13. The outstanding feature of the business meeting was the election of Dr. Frederick S. Hallett, of Hackensack, to membership on the State Society Nominating Committee. The scientific program of the evening consisted of a practical discussion, by Drs. Stellwagen and Kinney, of "Retention of Urine". Dr. Stellwagen spoke on "Retention of Urine, Its Phases and Management when Due to Stricture."



Just what to do in such cases has always been a problem. The first important requisite is kindness to the patient and gentleness in manipulation. Strictures may be of large or small caliber. Retention is due to swelling in the region of an old stricture. Always make a prostatic examination first to determine whether there is any prostatic involvement, for prostatitis will often defeat the passage of sounds.

Having excluded the prostate, now proceed. The filiform is dangerous, yet it is an excellent instrument when used with a tunnelled Goulet sound. Some prefer to use a soft rubber catheter first. This will pass if retention is due only to spasm, but, as too much instrumentation increases spasm, it is often best to start with the filiform. While working, put the patient in a bathtub of quite warm water or let a trickle of warm water run into the urethra or put warm cloths across the loins. These measures will often aid the easy passage of the filiform because it aids in complete relaxation of the patient. Be sure the tunnelled sound and the filiform fit. The end of the sound should be filed down with an Arkansas stone.

Having passed a filiform through the stricture, either leave it in or pass the sound over it when retention is marked. Tying the filiform in situ acts as a capillary drain and often gives sufficient relief in mild cases. It probably acts by exhausting the repeated spasm of the urethra which attempts to force out the foreign body. Relaxation follows and more filiforms can be passed; then dilatation can be carried out and should be followed to a point of hyperdilatation. This is better than cutting. Hyperdilatation should be repeated every once in a while.

The diagnosis of stricture can usually be made if the patient gives a history of involuntary voiding after urination. This is due to action of the urine behind the stricture but not on the trigone so that there is no sense of its presence. Complete emptying of the bladder in retention is not as bad as is believed. In old people with bad kidneys or with affected prostates, it is best to drain off 6 oz. and repeat in a few hours, or tie a filiform in situ and let the urine trickle out gradually. Having relieved the immediate retention, the next step is to pass a flexible bougie, not a solid instrument. Repeat until a No. 26 bougie can be passed, then start using sounds beginning with No. 24 and working up.

Many patients drift back to a retention due to spasm so catheterization must be resorted to. Hexamethylenamin is very potent in these cases; use 10-15 gr. intravenously, unless contraindicated, before operations about the scrotum. This seems to assist postoperative urination. In a case of so-called impermeable stricture through which a filiform cannot be passed, anesthesia, an opium suppository, or the above mentioned relaxation treatment should be tried; getting the patient on his hands and knees may help for this relaxes the rectum and often the urethra. Passage of an olivary bougie to the stricture with continued gentle pressure, allowing warm water to run into the urethra at the same time, may help to overcome the spasm and a filiform may be passed alongside the bougie. For lubrication use 10% iodoform emulsion in glycerin. Inject enough to distend the urethra. It is often good to tie the urethra after filling, and massage the lubrication back. This lubricant kills saprophytes and thus prevents urinary chills. Catheterization through endoscopes sometimes works, but very often not. Indwelling catheters are very good in these cases because rubber seems

to help dilatation. This measure however, should not be employed before a prostatectomy.

Complications: (1) A false passage may be made by anyone; it is bad and must be repaired by open operation. (2) Enlarged prostate is a big problem. This will be taken up by Dr. Kinney. (3) All sorts of foreign bodies are found but they are usually stones. When possible, push the foreign body back into the bladder and crush it with a lithotrite; in some cases it may be hooked out with a Monell metal wire hook. The use of grasping forceps is not good practice.

In speaking of "Retention Due to Prostatic Obstruction", Dr. Kinney said in part:

The causes of enlarged prostate are acute inflammations, abscess, and hypertrophy. The first instrument to use is always a soft rubber catheter. Attempting to pass a metal instrument is almost malpractice. Failure to enter the bladder is often due to too much eagerness. In acute inflammations use the methods of relaxation described by Dr. Stellwagen, and give in addition  $\frac{1}{4}$  gr. morphin—always fortified with atropin in these cases—or use hyoscin. Passing the finger into the rectum and gently massaging the prostate often helps in acute inflammations. With an abscess, incision and drainage are first essentials.

Lubricate the urethra well, be very gentle, and overcome the spasm of the posterior urethra by steady pressure. Do not make prolonged attempts. Try for 2 or 3 minutes then let the patient rest awhile. If the catheter doesn't pass, determine the type of instrument by the type of enlargement. Where there is a projecting lobe the straight olivary catheter or the Coudé may help. The overcurved metal catheter is good, but an overcurved stilet in a rubber catheter is better. Having passed a catheter, it is better to tie it in situ than to try repeated catheterizations. Retention often appears quite suddenly, as in cases where there has been residual urine, or following exposure of the perineum to cold, or after an alcoholic or gastronomic debauch. It also appears suddenly where there has been continuous dribbling of urine. If an instrument cannot be passed into the bladder at all, do not hesitate to do a paracentesis or suprapubic puncture. These procedures are perfectly safe with a full bladder, for the peritonum is stripped well back.

Sudden complete emptying of the bladder in prostatitis, is believed to be dangerous. With a retention of 400 c.c. or more, the renal organs, the circulation, and the nervous system are all involved. In the renal organs sudden relief causes capillary oozing; sometimes there is a renal hematuria, probably due to a sudden imbalance of pressure in the venous circulation. Albumin and casts, or even suppression may follow. These may all occur without any change in the blood pressure. The nervous symptoms that frequently accompany sudden relief are irritability, lethargy, or marked delirium. With all these symptoms the blood chemistry is still normal. In emptying the bladder, therefore, it is best to remove 8-10 oz., repeating the procedure in about half an hour.

Having relieved the immediate retention, the next step should be operation as soon as possible. The mortality in catheter life is greater than that following operation. The tolerance of the average bladder is peculiar, for some of the most careless men have perfectly clear urines, while some of the very fastidious become infected. Catheter life is beneficial for a while, but is only palliative. During this period the renal function should be checked up frequently by measuring the intake and the output. Frequent blood

chemistry examinations should also be made and as soon as the creatinin begins to rise, surgical treatment should be insisted upon. Just before operation the use of an indwelling catheter will eliminate the necessity of a two-stage operation. These patients should take large amounts of fluids, unless there is myocardial or valvular heart disease.

### BURLINGTON COUNTY.

R. I. Downs, M.D., Reporter.

The Burlington County Medical Society held its regular meeting at Cole's Hotel, Moorestown, N. J., April 14, 1926. The president, Dr. Roscius I. Downs, presiding. There were 29 members and guests present. The guests included Drs. Francis S. Chambers, of Philadelphia; William Martin, Atlantic City; J. B. Morrison, Newark, N. J.; Andrew M. Scott, Mt. Holly; and Mr. Richard Erskine, Philadelphia, and Mr. Roy, of Mt. Holly.

The minutes of the previous meeting were read and approved. Dr. D. H. B. Ulmer presented the resolutions on the death of the late Dr. F. G. Stroud as follows:

"In the death of Dr. F. G. Stroud, the Burlington County Medical Society has lost one of the older members and a loyal one.

"Dr. Stroud was born October 30, 1862, in this township of Moorestown, then a portion of Chester Township. He studied medicine at Jefferson Medical College and was graduated in March, 1885. He has practiced in Moorestown ever since his graduation, succeeding his father, who practiced here for many years. He was active up to the time of his death, which occurred suddenly on June 6, 1925.

"Dr. Stroud was a member of the Burlington County Medical Society for over 40 years, was very regular in his attendance and was exceedingly interested in all its proceedings. He was also a member of the State Society and the American Medical Association. He was a member of the Masonic Lodge of Moorestown, and of the Shrine.

"Dr. Stroud was, for years, township physician of Moorestown, Health Officer and School Physician, and in the latter work he took great interest. In his passing there has gone a genial and conscientious physician who will be much missed by his many friends."

It was regularly moved and seconded that these resolutions be reported to the State Society and a copy sent to the family.

An application for membership to the society was received from Dr. Andrew M. Scott, of Mt. Holly.

Dr. H. E. Longsdorf resigned from the Special Hospital Board of Burlington County as he was appointed a member of the Advisory Board, and Dr. Harry W. Bauer, of Palmyra, was appointed in his place.

Blue prints of the new Burlington County Hospital, (to comprise 100 beds) were exhibited by Mr. Richard Erskine, architect, and many suggestions were made by the doctors.

Dr. H. E. Longsdorf, of Mt. Holly, submitted the following report and resolution, which was passed unanimously

It is with a measure of extreme personal gratification that I am able to report to the Burlington County Medical Association that an active movement has been launched to raise sufficient funds for the erection of a new hospital to supplant the existing institution at Mount Holly.

Coming as it does after years of effort on the

part of the medical fraternity, it must be a source of deep satisfaction on the part of the Burlington County Medical Association to know that success in the campaign will mean a 100 bed hospital. That this will be of tremendous benefit to the doctors of the county goes without saying as it will give the individual physician a broader field and greater scope for his activities.

Despite the handicap of inadequacy, I submit to you that the present hospital has served well and faithfully the community and county in which it is located. It is a matter of record that the same quarters, which in 1895 cared for 90 patients, cared for 648 last year. One can readily understand, therefore, why it has been necessary for the hospital to deny admission to new applicants, as the hospital has been so continually taxed to the full capacity of its 35 beds that additional patients could not be accepted. I know I reflect the feeling of many when I state that other institutions have had to accept patients of local practitioners when the local hospital, had it been of adequate capacity, could have rendered the same, if not better service.

The inability of the hospital to render greater service is unfortunate and is the one feature of the past to be most regretted. But that is a matter of the past and I submit to you that for management, control of such finances as have come within the province of the board of managers, and for general supervision of the hospital, a record has been amassed that will stand unchallenged in comparison with similar institutions of much greater means and of broader fields of service.

That Mount Holly is the logical site for such an institution is undebatable as you are all familiar with the fact that modern hospital practice determines that the site for a hospital shall be in the center of the greatest area to be served and at that central point where a great highway system is concentrated to afford easy and rapid means of access from all parts of the county.

The Burlington County Hospital can enter the campaign for a new home with uplifted head knowing that the only criticism which can justly be directed to it can and will be eliminated by the erection of a newer and greater building in which to house the sick and injured of Burlington County.

I move you, therefore, Mr. Chairman, that the Burlington County Medical Association pledge the Board of Council and Board of Managers of the Burlington County Hospital its fullest measure of support and lend every assistance, as an organization and through its individual members, to the campaign to raise funds for a new hospital so that the day may be hastened when Burlington County shall receive at the hands of its hospital that broader and more efficient service which a county of its size and scope so richly deserves.

Dr. Longsdorf then introduced Mr. Roy, of Mt. Holly, campaign director for raising funds for the hospital. Mr. Roy prefaced his campaign plan with the statement that Burlington County needed an adequate hospital proportionate to its size. He said that the campaign goal was \$350,000. He recommended that, as an example to the public, the doctors of Burlington County pledge \$20,000 before May 16, when the drive opens. A committee was appointed to canvass the physicians of the county for subscriptions to the hospital fund; composed of Dr. George Tracy, of Beverly; Dr. Daniel Remer, of Mt. Holly; Drs. Emlen Stokes and Nathan Thorne, of Moorestown; and, Dr. Emlen Darlington, of New Libson.



Dr. Morrison addressed us on state topics of interest, in his usual convincing manner. These topics included: A new group insurance plan, consideration of the new public health laws recently enacted, and the value of the work of the Executive Secretary, Dr. Reik.

The meeting was then turned over to Dr. Joseph M. Kuder, Chairman of the Section on Surgery, who introduced Dr. Chambers, of Philadelphia, to speak upon "Common Orthopedic Problems Confronting the General Practitioner." Dr. Chambers outlined and advised the possible orthopedic problems in Burlington County with reference to the new hospital. Regarding club feet, he thought that the best and quickest results come from early treatment and that this condition is often the proper work of the general practitioner rather than the specialist. For bow-legs and knock-knees, due to nutritional disorders, proper diet and cure of underlying causes would straighten legs and often make braces and operative procedures unnecessary. He said that periodic x-ray examinations of epiphyses show progress in the cure of rickets. He attributed the underlying cause of foot pains to such general and circulatory diseases as Barlow's disease, diabetes, atheroma of vessels, tabes and chronic infectious arthritis. He explained that a way to distinguish infantile paralysis from cerebrospinal meningitis, even when there is a rigidity of neck muscle, is the fact that the head can be bent forward when the patient is turned on his side. The ironing board was recommended as a useful, convenient splint for spinal conditions, and ideal for tuberculosis of the spine in children.

Dr. Martin read a paper on "Treatment of Some Common Conditions by Physical Measures." This new phase of therapy was presented in a very appealing manner. (This paper will be published in full in an early issue of the Journal.—Ed.)

The society had thoroughly enjoyed its session and adjourned to meet in Burlington in June.

#### CUMBERLAND COUNTY.

E. S. Corson, M.D., Reporter.

Opening its hospitable doors to the County Medical Society, the Bridgeton Hospital entertained this organization intellectually and physically at its regular quarterly session April 13, 1926. The President of the society, Dr. H. S. Brannin, directed the intellectual, and Superintendent Ida Squamwood, directed the physical portions of the meeting. Everything was polished like the "handle of the big front door", in Pinafore, and ready for inspection.

Possible change of status of the Board of Trustees of the State Society was discussed, and the proposition submitted by Dr. Quigley was endorsed by a small majority.

Dr. E. J. G. Beardsley, of Jefferson Medical College, addressed the society on the subject, "Practical Points in the Diagnosis of Heart Conditions". He emphasized the fact that the patient should have his clothing removed so that action of the heart may be observed through the chest wall. Pulsation of the arteries and veins in the neck is an important element in making the diagnosis; as is also the position of the apex beat. Dr. Beardsley emphasized the favorable outlook in cases of functional heart trouble, especially juvenile cases. Nervous conditions should be carefully considered and the patient encouraged to correct them. Functional conditions never present enlargement of the heart; the murmur disappears on exercising; the apex beat is always in the normal position,  $3\frac{1}{2}$  in. from

the midsternal line and fifth interspace. Always let fall a line from the middle of the clavicle to the middle of Poupart's ligament to determine the normal position of the apex beat.

Organic cases always present an enlarged heart with displacement of the apex beat; place the open hand over the heart in order to feel the apex thrill. Most organic cases are due to the old type of rheumatic fever but the newer hybrid types are also causative factors. Mitral regurgitation is rare; mitral stenosis more prevalent. The periodic annual examination of individuals is essential to detection of organic conditions for the latter are often not apparent to the patient until heart consciousness develops; fullness in the heart region, shortness of breath on exertion, and swelling of the feet. If organic heart disease is discovered early it may be corrected by change in mode of living or occupation; if delayed until discovered by the patient, medication in addition to hygiene will be required.

Dinner was served in the dining room of the hospital, with the nurses in attendance.

#### ESSEX COUNTY.

Frank W. Pinneo, M.D., Secretary.

The Essex County Medical Society held its regular meeting Thursday evening, April 8, in the auditorium of the Academy of Medicine of Northern New Jersey, Newark, and witnessed a most interesting and remarkable demonstration of researches and inventions in the field of sound transmission. It was a demonstration of "Electrically Amplified Heart Sounds by the Multiple Electric Stethoscope", equipped with additional amplifiers and loud speakers, whereby all in the audience (which filled the auditorium) heard the heart sounds, both normal and pathologic, of patients present and also phonograph records of other patients made under the direction of Dr. Richard C. Cabot, of Harvard University, and Professor H. B. Williams, of Columbia University, with the collaboration of the Bell Telephone Laboratories Inc., in their researches on electrically transmitting, amplifying, filtering and recording of sound. These records included the very first so made by Dr. Cabot for teaching in medical colleges, and the demonstration proved the more extended value of these wonderful inventions for practitioners of medicine.

Western Electric Audiometers were shown and the measurement of acuity of hearing explained. The audiometer recently used in studying street noises in New York City was exhibited and explained.

The Cathode Ray Oscillograph, shown in a dark chamber, enabled the doctors to both hear and see, simultaneously, the action of hearts of actual patients.

This demonstration of outstanding wonders of discovery and achievement, made possible by researches of the Bell Telephone Laboratories Inc., was planned and carried out by Mr. H. Clyde Snook, whose genius in electrical inventions and generous management have put before the doctors a knowledge of these discoveries, which are really in the nature of by-products in the development of the telephone. He also was a pioneer in roentgenology and the inventor of an x-ray transformer now used by roentgenologists throughout the world.

The President, Dr. Elmer G. Wherry, made report for the Milk Committee explaining recent changes in Certified Milk. The Fairfield Dairy with its splendid herd, accredited by the Govern-

ment for 6 consecutive years, has been sold and its product is, therefore, not further certified by the Essex County Medical Milk Commission. It is now 33 years since the first production of Certified Milk in the world; Mr. Stephen Francisco being the original dairyman, and Dr. Henry L. Coit, of Newark, the sole founder of the Certified Milk Movement. The certified milk produced by the Wood-Brook Farms, Metuchen, New Jersey, will continue, as heretofore, to have the endorsement of the Essex County Medical Milk Commission.

The society, at this meeting, acted upon a communication from the Board of Trustees of the State Medical Society concerning amendments to the Society's Constitution proposed at the last convention (see transactions published in the supplement of the August Journal, p.p. 30 and 61). Answering 3 specific questions from the Trustees the members voted as follows: (1) No. (Not satisfied with existing provisions constituting the Board of Trustees); (2) Yes. (Change the Construction of the Board); (3) Favoring Dr. Eagleton's suggested amendment as follows: "The Board of Trustees shall consist of 28 members, (as at present); 7 officers by virtue of their office; 5 representatives of Judicial Districts to be elected as representatives of the permanent delegates; 6 representatives of the Fellows to serve for 3 years each; 10 delegates-at-large to be elected by the House of Delegates to serve the term of 5 years each; any of the 10 delegates-at-large may be Fellows if they are chosen by the House of Delegates."

The attendance at this meeting (nearly 300) was the largest on record in the county and they evidenced keen interest in both the scientific and business parts of the program.

#### GLOUCESTER COUNTY.

Henry B. Diverty, M.D., Reporter.

The Gloucester County Medical Society met at the Woodbury Country Club, April 15, 1926. The following members were present: Downs and Buzby, of Swedesboro; Hunter and Hollinshed, of Westville; Stout and Zapt, of Wenonah; Ulmer, of Gibbstown; Fidler, of Clayton; Ashcraft, of Mullica Hill; Sinexon and Wood, of Paulsboro; Lummis, Knight and Burkett, of Pitman; Duffield, of Glassboro; William Brewer, Campbell, Carpenter, Underwood, Nelson and Diverty, of Woodbury.

Dr. Perry, of Woodstown, a delegate from Salem County and Dr. Le Fevre, of Blackwood, from Camden County, were present.

After a short business session, the essayist, Dr. Charles C. Wolferth, of the University Hospital, gave a very interesting address on "Some Recent Advances in Cardiac Therapeutics", which was followed by a lively discussion.

An invitation was accepted from Dr. Madeline Hallowell, of Atlantic City, to hold the next meeting at her institution on the third Thursday in May.

A luncheon was served at the close of this very interesting meeting.

After due consideration of the problem submitted by the Board of Trustees of the State Society, the first question was answered in the affirmative, i.e., the Gloucester County Society is satisfied with the existing provisions for organization of the Board of Trustees.

#### HUDSON COUNTY.

M. I. Marshak, M.D., Reporter.

The Hudson County Medical Society met, April 6, at the Jersey City Hospital, Dr. J. F. Londrigan presiding.

Dr. Phillip D. Wilson, Attending Surgeon, Massachusetts General Hospital, Boston, read the paper of the evening on "Fractures", which he illustrated with lantern slides. He discussed the present-day place of fracture surgery and the difference in modern outlook as compared to that of prewar days. In thinking of fractures the functional result must be visualized; damage to soft parts should be considered. The entire problem of treatment is to restore the injured part to proper function at the earliest moment. A proper criterion as to results of any treatment should be, the time away from work and the effect of the injury on the permanent earning capacity, rather than cosmetic alignment alone. X-ray studies are necessary, both before and after reduction, and fluoroscopy is frequently required during reduction. Reduction should be done at once; before muscles are shortened and parts fixed. Plaster casts should be split to allow for swelling. The extension method should be used in all fractures of the shafts of long bones. Open methods of reduction should be used more frequently and if indicated should be used early. This method is especially applicable to joint fractures. In splinting parts one must leave as much of the limb visible as is possible. In considering the after-treatment, in order to obtain a proper functional result with a minimal period of disability, motion should be started early; at first supporting the fragments manually and gradually increasing motion until active motion is obtained. Massage and other procedures of like nature are not of as much use and importance as the active use of the part by the patient. Fracture should be protected by some type of support during convalescence.

After discussing the general features of fracture surgery, Dr. Wilson took up the various important fractures in detail.

Clavicle: The old type of Velpeau or Sayre splinting should never be used. The proper apparatus is a wooden T-splint known as the clavicular cross. If at all possible the recumbent method of treatment is the best.

Neck of the humerus: The arm is placed in the position of wide abduction. Most fracture dislocations must be treated by open reduction.

Shaft of the humerus: The cause of disability in this fracture is most frequently a stiff shoulder. This can be prevented by early motion.

Region of the elbow: These should be treated in a position of acute flexion for all except fracture of the olecranon. Strapping is unsafe, bandaging being preferable. Ischemic paralysis must be guarded against and as its onset is often insidious one must be on the watch for it. Where condyles are separated, the treatment consists of open reduction with suspension traction.

Both bones of the forearm: In order to preserve pronation, the convexity of the radius must be maintained. If the fragments are widely separated, open reduction might best be used, though traction with counter traction is sometimes preferable. The supinated position is the one of choice.

Colles: Proper reduction is the main problem. First dorsoflex the hand until the fragments are loose, then reduce properly and fix. In bad cases



the "bell hop" position is considered necessary. Early motion is essential. In dressing these cases, the thumb and fingers should have full movement.

Carpal scaphoid: This fracture is only diagnosed by x-rays. If fixed for from 3 to 4 weeks, union is usually good.

Neck of the femur: Intracapsular fractures are best treated by abduction in a plaster spica: Whitman's method. This should be followed by a caliper splint for a period of 6 months to a year. The results are quite good even if there is no bony union.

Shaft of the femur: In children, the results are good no matter what treatment is used. The Bryant overhead suspension should be used in children, whereas in adults, skeletal traction with ice-tong calipers, in conjunction with the Thomas splint, should be used.

Condyle of the femur: Here skeletal traction with a pin and the Thomas splint, is the treatment of choice.

Bones of the lower leg: Fractures in this region are best treated by reduction and the application of plaster, which should be split. Flexion of the knee and traction are necessary for reduction. The plaster should be applied in sections, from knee to ankle, along thigh to knee, then connecting up. The knee should be flexed at right angle. If the fracture does not reduce, it may be necessary to use a pin through the os calcis or above it and anterior to the tendon Achilles.

Ankles: Fractures here depend on the direction of the force. They may be produced by abduction, adduction, external rotation and posterior displacement. Pott's fracture is produced by abduction. Reduction is obtained by using force in the opposite direction to that producing the fracture, to overcorrect the deformity, and fixation by plaster.

The paper was discussed by Drs. Doran, Miner, Frank, Lang, Brossier, Swiney, Levine, Stewart, Londrigan and Wilson.

#### Osler Clinical Society.

M. I. Marshak, M.D., Reporter.

The Osler Clinical Society held its March meeting at the Union League Club of Jersey City, on March 17, with Dr. J. F. Londrigan presiding.

Dr. H. T. von Deesten presented a report of a case of "Pneumococcus Peritonitis in a Female Patient Aged 4 Years". There was fever, marked distension and some pain for 4 weeks with alternating rigidity and flaccidity of the abdomen. Tenderness was present, though not marked, but marked dullness over the bladder region was made out on percussion even when the bladder was empty. The blood examination showed 18,000 white cells and was at first positive to a Widal reaction. After the second examination the Widal reaction was negative. The von Pirquet test was negative. On operation, a quart of yellow creamy pus was removed. This contained a large number of Gram-positive diplococci and on injection into a guinea-pig produced a general septicemia with death in 24 hours; the pneumococcus was recovered from these animals. The abscess cavity was well walled off by adhesions.

The report was discussed by Drs. Dickinson, Minor, Franklin, Kelly, Newman and von Deesten. The question of the advisability of operation in these cases was taken up. In acute cases operation was not deemed advisable. The male cases were thought to be secondary to a pneumococcus infection elsewhere, while in the female

it is possible to have a primary infection of this type by way of the vagina.

Dr. D. Miner presented a report of "An Unusual Case of Intestinal Obstruction". The obstruction was due to a large gall-stone. This was removed on operation and the condition seemed to clear up. Four days later, the patient developed another obstruction which was proved by operation to be caused by another large stone. Dr. Miner showed both the stones, which were as large as an average English walnut, and stated that the stones found their way into the intestine by way of a rupture of the gall-bladder into the gut. There was no history of pain or any symptom referable to the gall-bladder.

The paper of the evening was read by Dr. E. Lupin, on "Pyelitis". He said that pyelitis should be suspected in any case of unexplained fever in an infant, and that no examination of a child or baby was complete, without an examination of the urine. Infection of the kidney may take place through the blood or by direct extension and many cases are due to the colon bacillus, though streptococci and staphylococci are found at times. The prophylaxis consists of having large enough diapers, promptly cleaning the child after feces is passed and using noncontaminated bath water. The clinical manifestation consists of chills, fever, septic in character, painful and frequent urination and, occasionally, uncontrollable vomiting. Colon infection is least liable to produce abscess formation. The blood picture shows a leukocytosis. Treatment consists of the use of potassium citrate in large quantities of water and sodium bicarbonate, either added to the food or given by rectum in a 5% solution, until the urine is alkaline. Auto-genous vaccines are sometimes successful. If urotropin is used it should be given before the urine is made alkaline. If multiple abscesses develop, operation may be necessary.

Drs. Rosenstein, Heilbrun, Cosgrove, Levine, Kelly, Bartone and Londrigan took part in the discussion.

Dr. Rosenstein called attention to the fact that in male children, more than 3 cells per field, and in females, more than 8 cells, should be considered pus. He also said that secondary pyelitis has 2 definite periods of the year in which large numbers of cases occur: in the summer, accompanying gastro-intestinal cases and in the winter, complicating respiratory disease.

#### HUNTERDON COUNTY.

Leon T. Salmon, M.D., Reporter.

About 30% of the enrolled membership of the County Society met at Flemington, April 27, under the presidency of Dr. G. B. Tompkins. The proposed amendment to the Constitution, changing the number of meetings from 2 to 4 a year was laid over for consideration at a special meeting to be held June 15. The Society instructed its delegate to vote for the Morris County plan of State Society government, or some similar democratic form to be suggested later.

Dr. G. N. J. Sommer spoke on "Foreign Protein Injections for Chronic Infections", and presented evidence of successful results of such treatment. He also discussed the early recognition of gall-bladder disease and laid stress upon the determination of causes antedating easily diagnosed conditions. Reference was made to a new diagnostic procedure, in which attention is paid to excursions of the diaphragm as revealed under the fluoroscope.

The "Treatment of Erysipelas by Heliotherapy" was discussed by Dr. L. C. Williams.

**MERCER COUNTY.**

A Dunbar Hutchinson, M.D., Reporter.

The following is a report of the meeting of Mercer County Medical Society held in the Carteret Club, April 14, 1926. Minutes of the preceding meeting were read and approved. The president, Dr. Comfort, called for a report of the special committee (consisting of Drs. North, Haggerty, Costill and Bellis) on the question of the organization of the Board of Trustees of the State Medical Society.

Dr. North submitted the following report: "Your committee appointed to consider the advisability of changing the present composition of the Board of Trustees of the State Medical Society will report as follows: The committee has carefully considered each of the propositions submitted by Dr. Hunter, Secretary of the Board of Trustees, for re-organization of the Board of Trustees, and it is our opinion that neither of the propositions offered would be of any advantage over the present organization of said Board of Trustees."

Following some discussion, Dr. Sommers moved that the report be approved and adopted. This motion was seconded by Dr. Schaufler and duly carried. A motion was also made and carried that our annual delegates be so instructed.

Drs. Ethel M. Powis and Howard Wiesler were regularly elected as associate members. The application of Dr. George A. Corio was read and referred to the Membership Committee.

The president then introduced Dr. Brooke Bland, of the Jefferson Hospital Staff, who spoke on "The Management of Labor". Dr. Bland gave a very interesting account of the progress in this branch of medicine during the past 40 years, referring at time to the crude methods formerly employed for alleviating pain. The statistical report on maternal and infant mortality was both enlightening and astounding, and made a profound impression upon the interested audience. Dr. Bland paid special attention to the various present-day theories concerning normal and complicated cases.

Several members expressed a desire that this paper should appear in our State Journal. (Dr. Bland has delivered his paper and it will be published in the Journal shortly.—Ed.)

Following a very thorough discussion of this topic, Dr. Bland was tendered a rising vote of thanks by the Society, and adjournment was then taken to enjoy a luncheon which was served to about 50 members.

**MONMOUTH COUNTY.**

Daniel F. Featherston, M.D., Reporter.

The March meeting of the Monmouth County Medical Society was held at the home of Dr. W. A. Rullman, in Red Bank, on March 31. Dr. Frank Snyder, of New York, read the paper of the evening entitled: "The Treatment of Chronic Arthritis".

Dr. Snyder is doing some original work in this subject using high colonic irrigations in a selected group of cases in which other methods of treatment have given no results, though in some other cases this is the method of procedure from the start, especially, in acute and subacute conditions when the patients are ambulatory. The technic employed is highly developed and only given by specially trained nurses who are able to pass the tube beyond the splenic flexure so as to wash out the right side of the colon. Dr. Snyder is claiming a higher percentage of cures

since the employment of this treatment than heretofore when only the older methods were relied upon.

The business session was postponed until next month.

The April meeting of the Monmouth County Medical Society was held at Torry's Restaurant, Long Branch, on the twenty-first, with Dr. Harvey Brown in the chair.

Dr. William F. Sharp, of New York, recently appointed consulting neurologist to the Monmouth Memorial Hospital, presented a discourse on the "Operative Indications Following Trauma of the Skull and Spinal Column".

Dr. Joseph M. Bryan reported for the Legislative Committee on the progress of medical bills in the last General Assembly.

**SOMERSET COUNTY.**

A. Anderson Lawton, M.D., Reporter.

The regular meeting of the Somerset County Medical Society was held in the Court House at Somerville, at 3:30 p. m., Thursday, April 8, 1926. Dr. John Ten Eyck, presiding. The secretary read the minutes of the previous meeting and they were duly approved.

After transaction of the usual routine business, the secretary presented and read a communication from Dr. Hunter, Secretary of the Board of Trustees of the Medical Society of New Jersey, setting forth several suggestions under consideration for changing the manner of electing Trustees and requesting an expression of opinion from the county societies upon this question. After full discussion, in which most of the members present participated, a motion was made, duly seconded, and unanimously adopted, saying that the Somerset County Medical Society is satisfied with the present organization and work of the State Society and knows of no reason for altering the constitution in respect to the choice of Trustees.

Dr. Rodger Cooley was elected to membership, upon recommendation of the Board of Censors.

Upon motion of Dr. Lawton it was decided to arrange for a meeting on June 10, to which the public should be invited, and at which time Dr. Reik, Editor of the State Society Journal, will speak upon the value of Periodic Health Examinations, and, a moving picture film, demonstrating the care of tuberculosis patients, will be exhibited.

**UNION COUNTY.**

Russell A. Shirrefs, M.D., Reporter.

A regular meeting of the Society, held at Muhlenberg Hospital, Plainfield, on the evening of April 14, was largely attended. Among the guests, the ever-welcome presence of Dr. H. O. Reik was noted. The regular order of business was suspended in order that the essayist, Dr. LeWald of New York, might be able to catch a certain train home. He told of "Some Interesting Recent Advances in X-Ray Diagnosis in Gall-Bladder Diseases", and illustrated his instructive talk with many stereopticon views and x-ray pictures. Dr. Crane reported a case of chronic myelogenous leukemia in a man, where the diagnosis was confirmed by autopsy. Dr. Darlington exhibited the patient's large infarcted spleen, and spoke of the clinical and pathologic manifestations of this strange disease whose etiology is un-



known. Dr. Hedges reported a similar case in a young married woman, who, for the present, is making satisfactory progress under x-ray therapy. Dr. Weigel reported 3 cases of non-union following fracture, and showed by x-ray photos, the successful results following autogenous bone grafts. Dr. Corbusier presented a boy of 14 whom he had cured of congenital wry neck by operation; and also showed pictures of an 8-year-old girl whom he is treating for vertebra plana which was probably congenital. Dr. Lufburrow reported a case of traumatic rupture of the spleen in a man whose operation for removal of that organ was followed by recovery. He told of another man who called at his office and said that he had been so troubled with scrotal pruritis that he had cut the itching part with a knife. On examination, one testicle was found to be entirely extruded. Dr. P. DuB. Bunting was elected a permanent delegate to fill the vacancy caused by the death of Dr. J. P. Reilly.

A vote of confidence was extended to the Trustees of the State Society, expressing satisfaction with their methods of procedure.

It having been found that the State Board of Medical Examiners had restored to Dr. I. A. Lawrence his license to practice medicine, in spite of the repeated protests of our County Society, the Censors were requested to make a formal complaint to the State Medical Society. The Secretary was asked to write letters to our local Senator and Assemblymen, thanking them for the interest and attention they displayed in matters affecting medical legislation.

Four new proposals for admission were received, and the following were elected to membership: Drs. Max Greenberg, E. C. Donald, Linden; E. W. Lance, Rahway; Grace M. Robertson, Plainfield; L. Imbleau, Union; Archibald Sinson, Maxmillian Imre, George T. Spencer, Elizabeth; Paul Geary, Westfield; and W. J. Hallock, Berkeley Heights.

Dr. W. T. Carstarphen gave a brief account of the excellent results he had noted in selected cases following the hypodermic use of novasurol as a diuretic.

A vote of thanks was extended to the Superintendent and the Nurses for the delicious repast they served, and which was much appreciated. It was in the wee small hours of another day when the meeting adjourned.

#### WARREN COUNTY.

F. A. Shimer, M.D., Reporter.

The quarterly meeting of the Warren County Medical Society was held at the Phillipsburg Elks' Club, April 13, 1926, at 10:30 a. m., Dr. L. H. Bloom presiding.

Drs. E. N. Brasefield, Harry Bossard and G. H. Bloom read very interesting papers, which created lengthy discussions. The regular routine business was transacted.

President Bloom appointed A. C. Zuck, G. W. Cummins and F. A. Shimer a committee to draft resolutions on the deaths of Drs. Charles M. Williams, William Kline and William J. Burd, all members of the Society who had died within a period of six weeks.

The following resolutions were prepared by the committee and adopted by the Society as applicable to all three of the deceased members named:

Whereas, The dark angel, Death, has again stepped among us and taken under his sheltering wings to the quiet harbor of peaceful rest, our

esteemed colleague, Dr. William Kline; therefore,

Let it be resolved, That we do hereby publicly express our appreciation of his sterling qualities. He was a man of refinement and culture; modest to a fault; never self-assertive, deeply imbued with the duties and responsibilities upon him by his chosen and beloved profession; tolerant of the opposing opinions of others, and with a heart full of charity for the weakness and frailties of humanity. His presence brought sunshine, his smiles sweet balm into the homes to which duty called him. We shall miss him many a long day and our sympathies go out to his family. May they see through their tears the nobility of his life as they never have seen it before and be comforted; and

Be it further resolved, That these resolutions be spread in full upon our minutes and a copy be sent to his sorely afflicted family who have our profound sympathies.

A. C. Zuck.

(Signed)

G. Cummings.

F. A. Shimer.

#### MENTAL CLINICS.

Established and Operated by the New Jersey State Hospital at Greystone Park.

By Marcus A. Curry, M.D., Reporter  
Morris County.

At the New Jersey State Hospital at Greystone Park an urge that has been felt for some time past has found definite outlet in the establishing of Mental Clinics throughout the counties of the northern tier of the State, which comprise the geographic district of the hospital and embrace the counties of Bergen, Essex, Hudson, Morris, Passaic, Sussex and Union.

Three of the seven outside clinics are already established in the county seats of Union, Bergen and Passaic. At Elizabeth the clinic is held on the second and fourth Tuesdays of each month at the Elizabeth General Hospital, in conjunction with Dr. Prout's Neurologic Clinic. The Hackensack clinic is held on the second and fourth Thursdays of each month at the Hackensack General Hospital. The Paterson clinic is held at St. Joseph's Hospital the first and third Wednesday of each month.

The establishment of the various county clinics is under the direction of Dr. Marcus A. Curry, Superintendent of the State Hospital, and their operation is under the personal supervision of Dr. Arthur G. Lane, Clinical Director of the State Hospital, assisted by members of the medical staff and Miss Mildred H. Hurley, Directress of the Psychiatric Social Service Department of the State Hospital with one of the psychiatric social workers detailed to the clinic service. Psychologist R. M. Beechley, of the State Department of Institutions and Agencies, also actively coöperates in this work.

These county clinics are being established to answer a long existing community need and as a convenient reinforcement and assistance to the general practitioner of medicine. It has been long recognized that in every community there are individuals who are not actually mental or nervous invalids, but who suffer in varying degrees from nervous and mental symptoms which hinder them in the full enjoyment of life or make them less efficient in their economic pursuits. Such moods as periods of irritability without

proper cause, depressions, blue spells, loss of interest in home and friends, jealousies, suspicious ideas and notions of not being treated properly by associates or employers, are all traits which, though they may not be conspicuously marked, indicate that such individuals are undergoing some conflict within themselves. Such warning signals should not be overlooked, for physicians who have made special study of such ailments have found in a large number of cases which later develop serious nervous or mental breakdowns that the individuals had exhibited forboding symptoms for weeks, months and oftentimes years before the actual breakdown occurred. A large majority of such sufferers have really no physical disease as a foundation for their trouble. Experience has shown that these mental peculiarities are based on emotional changes and thought processes which are purely imaginary and the resulting characteristic traits may also be magnified by friction with surroundings.

Great progress has been made in the field of mental hygiene during recent years, and it is now a proven fact that the childhood years are responsible for much of the conflict of later life. It is in this period that the first patterns of thought and conduct are formed, and when these become fixed they form habits and character traits with which the individual must thereafter contend and which will influence all the later years of life. Temper tantrums, irritability, moody spells, loss of interest in school, small conduct disorders which cause trouble with teachers and associates and more serious delinquencies against rules and laws are certainly not part of the life of the normal child. Whenever these changes become apparent, an effort should be made to correct them as early as possible. Many adults and children who are suffering from such conflict do not understand themselves. A frank interview with a specialist whose experience along these lines has enabled him fully to appreciate these abnormal symptoms in the light of their true value, may lead to an understanding of many of these problems. When an individual once becomes aware of the reason for his symptoms, much of the mystery surrounding them clears up, and he becomes better equipped to meet life's difficulties because he has learned of the limitations of his capacity and also has full knowledge of the forces that are controlling him.

The mental clinic is the crystalization of an endeavor to place at the convenience of the public a staff of trained physicians and social workers who may be consulted without charge, along any of these lines. All interviews are held in absolute confidence. No medical or surgical service will be provided by the consultants and whenever there are indications for treatment the patients will be referred to the family physician or to such physicians as they may select, with the clinic recommendations for treatment. In this manner it is planned to encourage and foster close coöperation with the medical profession and it is hoped that the general practitioner may find use for the facilities of the clinic and that it will be used freely as a consultation center where problem cases exhibiting mental or nervous complications may be brought for this special type of advice and service. And it may be added that the clinics already held have been patronized to more than capacity, and that they will be popular centers of consultation and advice in the future seems amply assured.

It is well known that preventive medicine has accomplished remarkable alleviation of human

sufferings. Many of the dread diseases which formerly were claiming a large number of useful citizens are being brought under control. For an outstanding example of this, one need only consider tuberculosis, the great white plague, which at one time was thought to be an hereditary disease that doomed the one afflicted with it. The wide publicity given to physical hygiene rules and proper living conditions during the past few years, with the aid of clinics staffed by experienced physicians, has robbed this destroyer of much of its dread. Something of a similar kind must be done to stamp out the ravages of mental and nervous disorders. The public must be taught the rules of mental hygiene and how to live comfortably without conflicts with environment.

It is the aim of the mental clinic to endeavor to render the same service for the mental and nervous sufferers as does the chest clinic for tuberculosis. That all cases coming to the clinic can be saved from actual breakdown is no more to be expected than that all individuals suffering from any other type of disorder may be recovered. But the earlier the advice is sought the greater the opportunity for favorable outcome. If only a small percentage can be brought back to full usefulness and to a life of contentment, it will, by just that much, help to check the tide of sufferers who are rapidly moving toward the doors of our institutions.

The "trial visit" for recovered and convalescent patients has been an established policy for some time at the State Hospital at Greystone Park. In many of these cases, as is to be expected, it is necessary for the patient to return to the old environment, old situation, old employment, old associates, and to all of the old customary factors which largely have been responsible for the development of the mental disorder. In the past, advice has been given to the individual during the hospital residence, on the problem of adaptation, and much supervision has been furnished by the psychiatric field workers of the Social Service Department who visit patients in their homes. With the establishment of the county clinics, opportunity will be furnished for still more careful and intensive guidance, as each such patient will be expected to visit the clinic at each of its regular sessions for further instruction and advice. Thus the chain of clinics which is being established not only takes care of the community need along the lines of prevention but at the same time enables more intensive aftercare of patients whose condition made it necessary for them to have been hospitalized.

#### His Efforts Ignored.

The victim of a motor-car accident was being examined by the village magistrate.

"You say you didn't see his number?" the magistrate remarked. "Could you swear to the man?"

"Well," answered the countryman, "I did, but I don't think he heard me."—Tatler.

"A few months ago some one told Jenny Becker she had a nice profile, and she's been living sideways ever since."—Farm and Fireside.

He: Well, the days are getting longer.

She: When did you get married?

—Smith's Weekly (Sydney).



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## HELPFUL SUGGESTIONS ON INFANT FEEDING.

JOSEPH H. MARCUS, M.D.,

Pediatricist to the Atlantic City Hospital.

A ten minute health talk broadcast from Station WPG, Atlantic City, Feb'y 1, 1926, under the auspices of the Atlantic County Medical Society.

A baby is not a toy or a plaything, but a great responsibility; his health, growth, and contentment depending largely on his mother. Both the mental and physical development of your baby depend upon 3 things, referred to as the trinity of human existence: (1) Heredity; (2) environment or surroundings; (3) food.

The first is beyond our control, for nature has already done either its best or its worst; the second, that of proper surroundings, is partly controlled by you; the third element, that of food, is entirely within control and the improper use of it can do harm to your rapidly growing baby.

Mothers do not wilfully deprive their babies of their natural food, but every mother should know that the reward for her patience and perseverance in furnishing breast milk for her baby increases *fivefold* its chances of living through the first year. There is no substitute for mother's milk. Cow's milk was intended for the stomach of the calf and not for the tender stomach of the new-born babe.

Milk now forms the basis of all foods for infants, but no respectable cow would recognize many of the compounds which are manu-

factured from it. Mother's milk, when available, is the only food entitled to consideration. All other methods of feeding the new-born infant must be looked on as makeshifts. Fortunate indeed are those babies fed on breast milk, especially during the summer months, for few of them develop severe diarrhea. Most babies can be raised on human milk, and the next best food for infants is cow's milk properly diluted, the latter being far superior to proprietary and patent foods in that while it does not produce the fat baby so desired by the average mother, it likewise does not produce cases of severe rickets and scurvy that so commonly develop when using certain types of patent foods.

Of every hundred babies who die of intestinal infection during the first year of life, 85 are bottle fed and only 15 breast fed. In considering the future of her child every mother should reflect that the imperfections and ill health of adults are to a considerable extent the result of mistakes in their care during infancy. To be sure there are some conditions in the mother which necessitate depriving the infant of its right to mother's milk, but the reasons or excuses given are many and varied. One of the most common excuses is a deficient quality or quantity of breast milk, or a combination of these two factors. Quite often this can be remedied; it is quite usual for the mother to have an increase of milk after she is out of bed. Wholesome diet, moderate exercise, sufficient rest, regularity in all things, a contented mind and a happy mood, all possible freedom from worry and nervous excitement,

and reasonable assurance that she is capable of nursing the baby; all these things are indispensable.

In order to stimulate and maintain an adequate supply of breast milk, there are 2 important factors to remember; the first is "regularity in feeding time", and the second, "thorough emptying of the breasts". If the baby is unable to empty the breast, the milk should be expressed manually and no matter what the interval between nursing, whether a 3 or 4 hour schedule, adhere to the time.

It is always best to feed baby with a bottle at the place where it is to sleep or rest, as moving immediately after feeding may cause the baby to spit up or vomit. Always hold the bottle in the baby's mouth at the time of feeding and never expect the food to be taken properly if the bottle is propped in the baby's mouth with the aid of folded napkins, pillows or other devices used to juggle the bottle in an attempt to keep it in a fixed position. The full benefit of bottle feeding will be best obtained by holding the bottle for the baby while the food is being taken.

The average baby can be fed cereal at the age of 5 months, giving 2 cereal feedings a day in conjunction with the bottle and not in between feedings. From this time on, the additional foods included in the dietary are increased gradually, so that up to 1 year of age, the baby is getting milk, cereals, orange juice, beef juice, broths, cream soups, green and starchy vegetables, dry toast, or zweibach and crackers. If baby is asleep at nursing time, wake him. Nurse him for about 20 minutes, though he usually gets three-fourths or more of the entire amount during the first 10 minutes.

Errors in infant feeding should be corrected during the first few weeks of life. At birth, the average weight is  $7\frac{1}{2}$  pounds and at 1 year of age the approximate weight is 22 pounds—3 times the birth weight—so you can readily appreciate the great importance of a proper foundation at this rapidly growing age of your baby.

Every infant, breast fed or artificially fed, should be weighed once a week: in some cases a daily record of weight may be necessary.

Scales should be tested for accuracy, the best kind of scale being the beam-type with weights, and the graduated beam registering ounces. Always weigh your baby at the same time of day, for comparison, and remove all clothes. If necessary to determine how much nourishment he gets in 24 hours, weigh before and after each feeding, as the amount taken each time varies. After every effort has been made to increase breast milk without result, complementary feeding should be resorted to, but not supplementary feeding. A complementary feeding immediately follows the breast feeding; a supplementary feeding takes the place of breast feeding and is really a substitute feeding. Some mixture of cow's milk, or some starch preparation such as farina, should be used for complementary feeding. If a more rapid increase in weight is desired, boiled butter is the fat that is best tolerated; butter should be boiled for 2 minutes, and up to 1 level teaspoonful may be used in the cereal.

If constipation exists, use strained oatmeal or cream of wheat; if stools are loose and frequent, rice flour may be used for complementary feeding. If mother's milk increases, the amount of complementary feeding should be diminished. Feed with a spoon, if possible, for not infrequently the baby will become lazy if a soft nipple is used and quite often will refuse to take the breast. I feel that one supplementary bottle a day should be allowed, depending of course upon the attitude of the mother. Some mothers would hesitate to give a substitute feeding when baby is thriving, while others would like to give one, and afford themselves 6 to 8 hours for recreation or shopping.

Another advantage of one artificial feeding a day is that the baby becomes accustomed to the bottle and it becomes known what artificial food he can digest so that if for any reason he has to be weaned suddenly there is no trouble in so doing. Vomiting and frequent movements are no justification for weaning providing the infant is progressively gaining; weight should increase on an average from 5 to 8 ounces per week. These disturbances can usually be prevented by lengthening the interval between feedings or by shortening the feeding time, or both.



The cause of vomiting may be too rapid nursing, overfeeding, or an excess of fat which is proportionately higher toward the end of the feeding. Nurse your baby as slowly as possible and interrupt the feeding if it is taken too rapidly. Sometimes a little water before and while nursing will prevent vomiting. After nursing place the baby on his right side and keep him as quiet as possible. If persistent vomiting occurs, with a progressive loss in weight, certain conditions of a serious nature may be present. Sometimes an infant cannot nurse on account of tongue-tie; this should be corrected immediately.

To prevent scurvy, orange juice should be given when baby is about 3 months old. If fed on the bottle, orange juice should be given earlier. It is best administered 1 hour before the second morning feeding and diluted with water. Do not add boiling water as this will, to a certain extent, destroy the vitamin content of the orange juice, which is the scurvy preventing element. If for some reason the baby cannot tolerate orange juice, you may give either tomato or bottled grape juice, as the element which prevents scurvy is also found in these foods.

Rickets is a preventable condition but recent reports show amazing figures regarding the prevalence of this disease among breast fed as well as bottle fed babies. The many bad effects of infantile rickets can be eliminated by early administration of cod liver oil or by applications of the ultra-violet rays. The best procedure is to employ a combination of both forms of treatment.

Although this talk is primarily addressed to mothers, yet the responsibility of rearing children must not be relegated to the mothers alone; the fathers should assume a certain amount of the responsibility. Proper guidance through infancy will certainly be productive of healthier and better babies, and when they reach adult life they will be in a better position to adapt themselves to the many difficulties imposed by present day civilization. Lead your baby into the proper channels of health, especially during the stage of infancy, when development is so rapid and when it is so vital to establish a firm foundation.

## CRYPTIC INJURIES.

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Atlantic City, N. J.

(Read by invitation before the Ocean City Medical Club, February 25, 1926.)

When Dr. Pettit asked me a short time ago to address you, the first thought that ran through my mind was just how interested you would be in hearing me discuss some stereotyped matter which I had culled from books for the occasion, and the second thought was that your first thought would no doubt be the same as mine has been on many similar occasions—viz: that you could have stayed at home in a nice comfortable chair, and read in half the time all the information imparted to you.

It is with the hope of avoiding such after-thoughts in your mind that I have adopted for my subject tonight "Cryptic Injuries"—a term of my own coining and one which I will discuss entirely from my personal experience of 11 years of active service with the Atlantic City Hospital. During my last surgical service at the hospital, which included the months of August, September and October, 394 surgical patients were admitted and, of course, among these were practically all of the most seriously injured victims of automobile accidents for miles around. This alone would afford ample material for a most interesting paper, but taken together with the experiences of previous years, I feel that we have learned much regarding acute traumatic surgery, and it is around some of the most interesting of these cases that my talk is to be woven.

The ever increasing amount of motor vehicle travel, with the increased rate of speed with which all traffic moves, leaves little cause for surprise at the increasing severity of the injuries received on the highways. The fact that most of the main arteries of travel are now hard surfaced roads adds also to the severity of these injuries, and there is little wonder that the nature of the personal injuries received in these cases has changed from simple fractures to compound multiple fractures; that the ordinary case of concussion of the brain, with possibly a slight linear crack, is now a depres-

sed fracture of the skull with severe intracranial damage, and too often, also, associated with other injuries in remote parts of the body. It is the common thing to see more than one extremity involved, and in 1 case that I recall all 4 were injured severely.

The multiplicity of these injuries often leaves the attending physician in a quandary as to just which one is really the most serious and responsible for the condition in which he finds the patient. And it may be that any, all, or none are responsible for the patient's condition and that the real cause is some cryptic injury, which is obscure, presents no symptoms and which we do not suspect. A typical example of this was in a man admitted with a fractured femur, in shock and great pain. Little else was found on a cursory examination. The leg was immobilized, the patient was treated for shock and nothing much more thought of the case until abdominal pain and distention due to a rapidly developing peritonitis, developed from, what was later found to be, a ruptured gut, but which at the time of admission presented absolutely no symptoms.

Each year we see more and more of these traumatic complications arising from automobile accidents and while it is not my purpose to tell you gentlemen how these cases should be treated, I would like to make a plea for a more careful study and a closer observance of all accident cases, with the thought in mind, that even in patients apparently only slightly injured, serious and even fatal symptoms may develop in a few hours.

The increasing number of accident cases that come to litigation must also put us on our guard, not only to make careful, thorough examinations, but to accurately record and keep all of our findings.

Tonight I intend to give you from my own experiences a few examples of the many cases that have come under my care for one condition and where we have found other conditions far more serious. Inasmuch as injuries to the head and chest are far more obscure than those in other parts of the body, I will begin with the feet and work up, so that this rambling talk may, at least, be somewhat orderly.

While, as a rule, injuries to the feet present

no serious problems, nevertheless I have seen at least 3 patients during the past summer walking about with 1 or more fractured phalanges, and in 1 case there developed an osteomyelitis that necessitated the amputation of a toe. An x-ray examination in this case, of course, would have demonstrated the exact nature of the injury, and proper immobilization would have saved this man's toe for him.

It is now a well known fact that many of the old "sprained ankles" were in reality a crack in the fibula, or a small chip off the internal malleolus of the tibia. An x-ray picture should be taken in all "sprained ankles", mainly because if there is a fracture proper immobilization will do much toward preventing any permanent disability and minimize the likelihood of a painful ankle; and, secondly, we must bear in mind that with the knowledge the layman has at the present day of many of these things, we remove at least one chance for institution of a suit against us.

Right here I might say that, selfish as it may seem, if for no other reason in all doubtful cases we should exercise all precautions to guard against having a suit brought against us. Malpractice suits travel in sporadic waves throughout the country, and at the present time there is a slight epidemic in New Jersey; even the most grateful patient soon loses his gratitude when some shyster lawyer demonstrates to him the ease with which he can get a few thousand dollars for damages. While it is true that you may carry insurance to pay the actual amount of damages that might be assessed against you, I am sure that none of your insurance policies carries a clause to compensate you for your time, trouble and mental anxiety in these cases, and, as is so often the case, an ounce of prevention is worth many pounds of cure.

A negative x-ray report is no disgrace—it simply means you are careful. A negative laboratory report is not a worthless piece of paper—it is, as a rule, a definite statement that one certain suspected condition is *not* there, and thereby enables you to better concentrate your thoughts on other possibilities in the case. So then, let me repeat, in all sprained ankles have an x-ray picture taken. It cannot possibly do any harm.



Fractures of the tibia usually present no difficulty in diagnosis or treatment, except those very oblique fractures associated with a complete fracture of the fibula, and in some of these cases you may find difficulty in maintaining perfect apposition. In this event you should resort to operative procedure. It is generally simple and comparatively safe; it shortens the period of convalescence, and, last but not least, it practically assures you of a perfect anatomic and functional result. The simple suturing of the ends of the bone with kangaroo tendon, and the proper application of a plaster cast is all that is necessary in most cases, and that, after all, as Albee says, is the secret of success in the treatment of all fractures, to get the ends of the bone in apposition and to hold them there.

The fracture of the femur can be extremely troublesome. The simple transverse, or even oblique fracture, as a rule, can very readily be treated by a posterior straight splint, Buck's extension, double inclined plane, or some other well known simple method, but, as mentioned before, the trauma in these cases nowadays usually results in some complicating factor, such as the splintering of the ends of the bone or the interposition of muscle, thus making the ordinary closed reduction practically impossible. In these cases, also, it is often wise to resort to some operative procedure, after 1 or 2 honest efforts at reduction have been made. At the present time, this is not such a hazardous procedure. It can be done with comparative safety, with definite knowledge of the true condition and position of the fragments, and perfect apposition can, as a rule, be obtained by the application of a cast with the patient on some mechanical extension table such as the Albee or the Haley, or one of their many modifications. Often, all that is necessary, with the patient on these tables, is to open down on the fracture, remove any interposed soft structure, hook the fragments together, close the wound, and apply the cast. The beautiful feature of this manner of reduction is that the part can be seen and felt, we are assured of perfect bony apposition, and the position can be maintained until the cast is applied and dry. In some cases it is necessary to drill a hole in each fragment and suture

them together with kangaroo tendon; in other cases the Lane vanadium steel plate is used; while in still others it may be necessary to use a bone graft. Cases in which it is necessary to resort to the latter procedure get uniformly good results and that in patients who would have become permanent cripples not many years ago. I do not mean to be understood as advising operative measures in all fractures of the femur, but I do strongly urge it in those cases where a satisfactory reduction cannot be obtained by the closed method.

The next common injury that we find as we ascend the human body is fracture of the pelvis. This condition is by no means as rare as one might think, and certainly far more common than in former years. Simple fractures of the pelvis, of course, cause no great concern as proper immobilization gives uniformly good results, except perhaps for some permanent backache, varying in degree with the severity of the fracture. The chief cause for concern comes in those severely shocked patients, where we must rule out, or at least attempt to rule out, any injury to the urethra or bladder, and any injury involving the intestines. All cases of injury to the pelvis should be catheterized at once, and a careful examination of the urine should be made. If no urine, or only a small amount of bloody urine is obtained, a possible rupture of the bladder must be considered, and if another later attempt to secure urine is also unsuccessful, an operation should be performed at once. There is nothing to be gained by waiting until peritonitis develops, and much is to be lost. Certainly we must bear in mind the fact that the urethra and the bladder may easily be ruptured when there is no fracture of the pelvis.

To illustrate: A laborer slipped while straddling a piece of 2x4 and received a blow in the perineum. He rested 5 or 10 minutes and resumed work. During the night severe pain developed, and the next day the family physician was called; he diagnosed the case as one of severe bruises to the perineum, prescribed lead water and laudanum, and asked to be called in a few days if the patient was no better. On the fourth day he was called to find his patient with a tremendously enlarged scrotum, edematous perineum, and edema extending al-

most up to the umbilicus. I was then called in consultation. It was a clear case of ruptured urethra. The operation which I performed was a radical one, with multiple incisions and drainage of the perineum, thighs, buttocks and abdominal wall. After a very stormy convalescence over a period of months, during which time the buttocks, scrotum and other tissues sloughed away, the man eventually recovered. All this loss of time, all this pain, all this suffering could unquestionably have been avoided if the physician had catheterized this man at his first visit.

I am almost ashamed to say that I have seen 2 bladders ruptured while the patients were confined to the hospital: One, in a woman, sent in with the diagnosis of pregnancy and, of course, having pains; the other, in an unconscious man who was thought to be distended with gas. These errors seem inexcusable, but if they happen in hospitals it simply emphasizes the extra precautions we must take when practicing medicine in private homes and without trained assistants.

The subject of rupture or severe trauma of the various abdominal viscera is ample material in itself for quite a lengthy paper, and in a talk of this kind I must, of necessity, only touch the most salient features. Of course we all know that the order of frequency of occurrence of rupture of solid organs is first the liver, second the spleen, and third the kidney. I have seen and operated upon several cases of each. The liver gives us the greatest concern from an operative standpoint, as we are practically helpless in severe lacerations of this organ. The spleen can easily be removed in most cases, as of course can a kidney. Of 3 patients upon whom I did splenectomies, 2 are walking around and working. Patients seem to get along without any apparent difficulty when the spleen is removed, and there has been little change in the blood count of the last patient operated upon though we have watched him carefully. The secret of success in these cases is to make the diagnosis early and operate as soon as the diagnosis is made. Delays are dangerous, and I might add, usually fatal.

You all know the cardinal symptoms of internal hemorrhage, and this, of course, is what we have in these cases. It is well to remember

the almost immediate rapid rise in leukocytes in these cases—this leukocytosis occurring as soon as a half-hour after the accident. This is a most important adjunct to our other findings, and one that will often decide an otherwise obscure condition.

My experience has taught me that rupture of the intestines may occur from such apparently far-fetched causes, that in any case of unexplained abdominal pain following an accident, and with the patient apparently in worse condition than we can account for by the signs we find, we must always suspect a rupture somewhere in the intestinal canal. These cases, of course, occur without any evidence of an external wound and may even result from falls on the feet or buttocks, or blows on the back or the loins. DaCosta states that a violent oscillation may even cause the rupture. At the time of the accident, there may be simply a contusion of the gut, which is followed by rupture several days after the accident. These are the puzzling cases, and the ones that must keep us on the qui vive. The majority of ruptures occur in the ileum. The duodenal rupture ranks second in frequency and is the most difficult to deal with from an operative standpoint. The large intestines are rarely ruptured except when direct force is applied. The symptoms of the typical case are well known as they are well marked: profound shock, tympanitis, abdominal pain, and rigidity, rapidly followed by peritonitis if the patient survives. We should make every effort to diagnose the condition before peritonitis develops, as an early operation is a safe procedure and the prognosis is good. Persons have been known to return to work for many hours after such an injury, and in 1 case of mine, where the man was run over by a wheel of his own truck, he drove back to his home, put up the truck and then went to bed and sent for his physician. I operated upon him as soon as he was admitted to the hospital, which was 2 days later, and I feel that his fortitude, and his physician's procrastination cost him his life. I have never seen an early exploratory laparotomy do any harm in these suspected intra-abdominal injuries, and I am equally satisfied that I have seen many cases in which a delay of but a few hours would have



caused the individual's premature departure from this terrestrial sphere.

We now come to thoracic injuries, and if anything that I have said about abdominal injuries has led you to believe that I am radical, prepare now to change your opinion, for in chest injuries I must strongly advise that the patient be left severely alone, kept under the influence of morphin, and an ice cap applied to the chest at the site of injury. Certainly, in the rare cases of stab wounds of the heart, brilliant results may be obtained, but in any serious lung condition I have seen nothing but harm follow meddlesome surgical interference.

In our ascent of the human skeleton a word or two regarding fractures of the vertebrae as I have seen them would probably not be amiss. A few axioms well worth remembering are: first, that the spinal cord never regenerates, that only nerve tissue distal to the ganglia has the power of regeneration; second, the lower down the spine the injury the better the prognosis; and third, injuries in the cervical region are practically always fatal. My results with laminectomies have been no more satisfactory than those cases treated conservatively, and my experience with possibly 15 or 20 such cases leaves me with the same vague ideas as to treatment that I had upon seeing my first case.

The next, and last group of injuries that I will discuss with you are fractures of the skull with their associated intracranial injuries. There is no field of surgery more interesting, there are no injuries more serious, and none so difficult to diagnose accurately as some of the cryptic intracranial injuries. An intracranial hemorrhage, following an injury, may creep up, as the thief in the night, and steal from us before morning, an apparently slightly injured person. On the other hand, an apparently mortally wounded head case, may gradually react and without any surgical interference whatsoever return to normalcy in an almost incredibly short time.

Given an individual with external evidence of a head injury, semiconscious, and exhibiting some signs of intracranial damage, what may occur? Will he improve by rest and bromides, or will he become progressively worse? That is the question; the answer is one that exper-

ience alone can teach us. Certainly the severe, depressed fracture of the skull leaves no doubt as to what should be done. The depressed fragments should be removed as soon as possible, the dura opened, the hemorrhage controlled, and drains inserted into the wound. But what about the ordinary case, with no wound, with no apparent depression? These are the cases where experience and time alone can determine our course. The roentgenogram in these cases is of little value. Certainly an x-ray study should be made, but a fracture of the skull, per se, is the least harmful of all fractures—there is no reduction necessary in the simple fracture, the bones are already immobilized, and there is nothing to be done but to allow nature to heal the crack. But how much *intracranial* damage has been done?

The patient with unequal pupils, with localized convulsions, with a slow pulse getting slower, should be operated upon as soon as he is sufficiently out of his shock to warrant the risk. If none of these signs are present, I feel that we are not only safe, but wise, to await further developments. If the pulse maintains its rate, the pupils are equal, the eye-grounds normal, and there is no marked increase in the tension of the spinal fluid, there is no indication to rush the patient to the operating room. On the other hand, when these head cases once begin to "go bad" there is no time for procrastination, and the trephine, in the hands of a competent surgeon, offers the patient his only chance for his life. A decompression is not in itself a serious operation, but it is done only in grave conditions and, therefore, the mortality rate must needs be high.

Another moot question is the morbidity in these head cases. Is there less epilepsy, less chronic headache, and better mentality with a decompression, or is the reverse true? Unfortunately, like other things in the practice of medicine and surgery, 2 and 2 do not always make 4, and from my experience with hundreds of fractured skull cases, both operative, and nonoperative, I feel that it is the nature of the injury rather than the nature of the treatment that leaves the individual with or without epilepsy, or with or without headaches, as the case may be.

My statement regarding "hundreds of frac-

tured skull cases" may at first seem exaggerated, but I assure you that it is not. During the summer months, which are included in my service, it is not unusual to have as many as 10 or 12 fractured skull cases in the Atlantic City Hospital at one time, and as many as 4 or 5 frequently come in during one day. Professor DaCosta, in going through our wards one day, told me that we had more fractured skulls than they have at the Jefferson Hospital.

Due to an unfortunate occurrence at the hospital during my resident service, I have been especially interested in this type of injury. I refer to the following incident:

Every morning at 2 o'clock a freight train shunts out of Indiana Avenue to go to Longport, via Atlantic Avenue. A certain laborer was in the habit of "hopping" this train. On the morning in question he was late, just caught the train as it was passing, got on by the inner side, and struck a trolley pole, before he could properly climb aboard. He was knocked off but gathered himself together and started to walk. A severe headache developed and he came to the dispensary. My colleague was awakened and went down to see the man, who was apparently all right except for his headache; he walked in, talked rationally, and had no eye signs or any other evidence of a severe injury. He was told to go home and go to sleep, and that he would be all right in the morning. He went home, but could not sleep because of the headache, and again came to the dispensary at 7 o'clock. My coresident was called again, and when he saw the same man, with the same complaint, but still without any visible signs of serious injury, he was somewhat peeved, as most residents are when their sleep is too often so rudely interrupted without apparent justification. An argument ensued, and the man was ordered out. About 3 days later he was sent in on the medical service because of these uncontrollable headaches. X-ray examination at the time showed no evidence of fracture and we were glad to send the man out, thinking that he was trying to get a case against the railroad.

The next report came from the Philadelphia Hospital and was the report of his autopsy: A slight linear crack in the occipital bone, with profuse intracranial hemorrhage. There is no

implied criticism of the resident who sent him out. I would probably have done the same thing. There is no criticism of the roentgenologist, as linear fractures of the skull are often not only difficult, but sometimes even impossible to demonstrate, but the moral that I gathered from this case, and one that I have seen demonstrated time and time again since then, is that all head cases are serious until time proves them otherwise. The severity of the injury cannot be judged by the nature of the accident nor the symptoms that manifest themselves early. There is only one safe and sane course to pursue in all these cases, and that is to put the patient to bed, watch him closely for several days, and at the first sign of anything unfavorable in the case the skull should be opened and explored.

I could relate at least 10 or 12 cases almost identical with the one previously mentioned. Only last month practically the same thing happened, but fortunately was discovered before it was too late. It happens every day in some large hospital somewhere in this country, but that is no excuse for its ever happening to us, and if we always follow the advice that I have just given regarding the careful observance of all head cases over a period of a few days, it can never happen.

What harm can come from keeping a patient in bed a few days even if the injury is not severe—or at least does not turn out to be? You need not feel chagrined. Perhaps the slight oozing that was present from the rupture of a small vessel was controlled by the rest in bed, the restricted diet, and the vigorous catharsis that you instituted. Who knows but that you have saved the man an operation—or even saved his life? The very fact that the man does not develop any untoward symptoms does not necessarily indicate that he would not have developed them had you not taken the precautions that you did. Had the man just mentioned been put to bed at 3 o'clock on the morning of his accident and kept there for 3 or 4 days, it is not only possible, but highly probable that the bleeding would have ceased, the extravasated blood become absorbed, and the man be living and well today.

Gentlemen, I feel that I have already consumed too much of your time in talking to you



about injuries with which no doubt you are all very familiar, and about treatment which no doubt most of you follow, but if I have been able to bring to your attention some injury that you have not seen lately, but which might be the very one that confronts you tomorrow, and if because of this little talk you are better prepared to recognize the condition, I feel that the evening has been well spent.

In closing, let me make a plea for more careful study of all our accident cases, more frequent use of the x-ray in doubtful cases, and the use of every laboratory means known to science for the better diagnosis, and, consequently, the better treatment of many of these "cryptic injuries" which confront us every day. As the wheels of progress move, these injuries will become more complicated, and their diagnosis more uncertain, and it is only by conscientious study, and close coöperation between the medical man and the surgeon that the best possible results will be obtained for the patient.

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## PRINCIPLES OF TREATMENT IN SPIRAL FRACTURES.

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In the realm of medical and surgical diagnosis, rarely is one afforded the opportunity, in the study of a disease, to have revealed to him the degree of tissue disturbance that occurs, as in a fracture, considering the definition of disease as the reaction of tissue to an injury. Likewise, rarely is the therapist afforded the positive indications for treatment that a fracture presents after study by the x-rays. Whether these indications can be accomplished or not, can be answered in a large measure by the same means. The x-ray not only makes an accurate diagnosis but affords a positive check on the results of our therapeutic measures. It does not tell us the degree of injury to the soft parts but, fortunately, in the repair of the associated reaction, nature is very kind and needs little help; though that

which she does require she demands should not be a violation of the laws of pathologic physiology which she uses to restore normal function. In the treatment of a fracture, any other trauma than that caused by the exciting injury should be avoided if possible.

Inasmuch as the surgeon most commonly receives a case of fracture from the general medical man, it should be the surgeon's duty to afford his medical colleague methods for diagnosis and indications for treatment. If I had some means of collecting and presenting to you the figures on the number of cases of fractures which have to be treated by medical men each year, it is my firm belief that such figures would surprise us all. In a condition with known tissue changes, marked disability and pain, the methods for relief should be made as attractive as those of modern endocrinology.

With this feeble justification for presenting such a subject to medical gentlemen, I will beg the indulgence of the surgeons for presenting what I believe are a few points not commonly known.

On the Surgical Service at City Hospital, in handling cases of spiral fracture in different ways, we found it difficult to secure anatomic reduction and sought for a reason for this difficulty in a study of the mechanism of production and reduction with the hope that it might lead to better results. We found the greatest help was derived from learning how to interpret our x-ray films. The spiral fracture has all the essential difficulties of an oblique fracture with the latter's tendency to over-riding, but with the added feature of a rotation displacement. To correct the latter without operation one should have certain points in mind which can be obtained easily from the x-ray view. Without these facts, in a simple reduction, one is working rather blindly. In the open operation, simple rotation of the distal part of the limb, by an assistant, instantly shows in which direction it is necessary to move in order to close the separated fragments; whereas in a closed reduction, not done under the fluoroscope, the result of manipulation can be determined only after subsequent x-ray findings.

Fluoroscopic work on fractures has some

marked disadvantages. The operator is unaccustomed to the occasional procedure. He cannot see enough detail. He is working under disadvantages of table, light, and assistant's retention. The way the operator sees the reduction is registered in his brain only, and must subsequently be put in the permanent form of a film. The major portion of fractures, necessitating anesthesia for reduction, require a general anesthetic. Gas oxygen rarely gives sufficient relaxation for efficient work; ether vapor, in the presence of sparking currents, is dangerous; chloroform requires skilled anesthetizing, which is not always procurable, and the absence of which in a dark room incurs too great a risk.

Methods of manipulation, and their limitations, should be learned to make the treatment as simple and easy as is possible for good results.

Spiral fractures are confined to some of the long bones: the humerus, femur, tibia and metacarpals. Curiously, this lesion is rarely seen in the radius and ulna; the normal rotation of the forearm does not allow torsional strain to produce a spiral fracture, as the same strain would do for the tibia.

The bones commonly affected are proximal to parts of a limb, which by reason of anatomic formation afford a distal lever at such an angle to the long axis of the limb that great torsional strains are easily produced. Examples being the forearm, for humerus; leg, for femur; foot, for leg; fingers, for metacarpals. These levers act in 2 ways: (1) The part of the body forming the lever is fixed and the body is moving; as for example, where the foot is held in some entanglement. (2) The inertia of the heavy body forms a temporary fixed point for the proximal end of the bone, while the lever, at the distal end of the bone, is turned; as, for example, a sudden movement of the foot slipping on ice.

In the lower limbs there is an additional force, produced by the unsupported weight of the body, causing a downward thrust. In the upper limb internal rotation, anterior to the body, is limited by the latter, unless the arm is abducted.

Internal rotation, posterior to the body, is limited by muscles and ligaments at the should-

er. External rotation is limited by the same factors. The common spiral fractures of the humerus are produced by outward rotation of the arm because the trunk prevents the forearm being carried to extreme internal rotation without extension of the forearm. With extension of the forearm, torsional strain of the humerus is prevented by rotation of the forearm at the elbow joint. However, if the humerus is extended backward from the shoulder, carrying the forearm posterior to the trunk with the forearm flexed, torsional strain can be produced by internal rotation, but is rare.

The femur has marked freedom of movement at its upper end, but strong muscular and ligamentous limitations for any point beyond the normal range of movement. The leg forms a powerful lever for torsional strain, and spirals of the femur are not infrequent.

We see the spiral fracture most frequently in the tibia, due to the rotation of the foot either externally or internally against the inertia of the body, or the lever action of the flexed leg under suitable conditions produces a twisting of the bone ends in opposite directions. The resultant of these forces rends the bone apart; the line of fracture forming a spiral, which may have either a right or left hand twist. Flexion then active completes the fracture.

Let me digress and turn to the common machine screw thread with which we are all familiar. If a bolt, screw or pipe-end has a right hand screw thread, it is driven or tightened by turning it to the right—the direction in which a clock's hand moves. If such devices have a left hand thread, they are driven or tightened by turning it to the left or counter-clockwise. In the right hand thread, the thread starts nearest the observer at 12 o'clock, the turns are to the right, and proceed away from the observer. The left thread is just the reverse or against the clock movement.

The lines, in a spiral fracture, follow the same rule, starting from the distal end of the extremity and forming right and left spirals. In the case of a fracture, however, the line of fracture separates 2 fragments. If it is a linear fracture no reduction is required. If there is marked separation of the fragments, the prin-



ciples involved in the right and left thread must be considered in the reduction.

In the right hand spiral the lesion has been produced by turning the distal fragment to the patient's left or our right, or the proximal fragment to the patient's right and our left. In the left spiral, the lesion is produced by turning the distal fragment to the patient's right and our left, or the proximal fragment to the patient's left and our right.

In reduction we must consider the body as the fixed point, as we can control the distal fragment only. Hence, we must apply the old rule—to reverse the mechanism of production by turning the distal fragment in a direction opposite to that of production. Curiously enough this gives us the rule, that a right spiral is reduced by turning the distal fragment to our left, but the patient's right; a left spiral is reduced by turning distal fragment to our right, but to the patient's left. A simple table can be arranged for purpose of reference until the principles are understood.

The symptoms embrace those known to all with the qualifications that owing to the line of fracture being long, swelling extends for a considerable distance along the limb. In a child, I have seen it confused with osteomyelitis both ways. Direct tenderness is more extensive, pain on indirect pressure is not always marked. False motion and crepitus are not easily elicited and should not be too energetically sought. The detailed diagnosis depends on the x-ray picture and without its aid this paper would be unjustified.

If one asks the roentgenologist what is necessary to make a diagnosis, he will say it can only be done by stereoscopic views. If one will take an anteroposterior and a lateral view of a spiral fracture, the contrary can easily be demonstrated.

Given an anteroposterior view of a tibial spiral, with the lower end of the line of fracture running upward and to our right, and a lateral view of the same with the lower end of the fracture line beginning at the anterior border of the bone and extending backward or posterior and upward, one has a right hand spiral. If the lateral view shows the line beginning on the posterior border extending forward and upward there is a left hand spiral.

For simple rules the following are sufficient: (1) Determine a fixed starting point for the distal end of fracture line. (2) Determine whether the starting point is anterior or posterior on the bone. (3) Determine whether the line of fracture extends upward to the right or left of the observer in the anteroposterior view. (See illustration on next page).

Correction of the spiral displacement is brought about by following the rules stated above. Overcorrections should be guarded against by aligning anatomic landmarks and reduction checked by x-rays. Though both types of spiral occur in the tibia, theoretically only one occurs in the humerus; a left in the right and right in the left.

Dr. Howard D. Collins, my former chief at the City Hospital, has called attention to a most important point in x-ray diagnosis, which is, that in every case in which the x-rays show a spiral of the lower part of the tibia, if the general direction of the line of fracture be continued in a spiral direction above the immediate lesion, where this line crosses the fibula, a fracture in the latter will be found. I do not recall one instance where this rule did not hold true. It is, therefore, imperative for purposes of complete diagnosis to have a case which shows a low spiral of the tibia, but does not show the upper end of the fibula, retaken to show the full length of both bones. Omission of this procedure may not prove a true economy to the responsible party.

The rôle played by the interosseous membrane, in parts of limbs where two bones exist, has not been given much consideration. I personally believe that by its attachment to the 2 fragments a fixed point is formed, which aids in the rotary reduction. Some surgeons have advanced the rule that all spiral fractures should be made open reductions but I think that is entirely too extreme. These cases have large areas of osteogenetic tissue exposed, which tends to repair rapidly provided the bone vascularity has not been interfered with or any soft tissues interposed. Open reduction interferes with repair, but affords opportunity for better reduction. Retention is not easy and mechanical retention devices not only delay repair but predispose to infection. It is

**Anteroposterior Views.****Lateral Views.****Fracture**

1. Fracture line runs up to right.

Fracture line runs up from anterior to posterior border.

Right Spiral



2. Fracture line runs up to right.

Fracture line runs up from posterior to anterior border.

Left Spiral



3. Fracture line runs up to left.

Fracture line runs up from anterior to posterior border.

Left Spiral



4. Fracture line runs up to left.

Fracture line runs up from posterior to anterior border.

Right Spiral





necessary only when honest, persistent endeavor has failed to close the fracture gap, or to secure such alignment as will insure adequate weight support; where it is difficult to retain reduction, or, where union without bone graft appears improbable.

With fair reduction and nonunion, bone grafting should be delayed until the cause of nonunion can be determined and prolonged time for bone formation be allowed.

It has always been a point of great interest to me as to where the idea originated that a patient cannot have good function unless the x-ray picture shows perfect anatomic reduction. From a service to which representative fracture work of most of the large hospitals of New York is transferred for recovery and not rarely for revision, I can say that perfect anatomic reduction is almost unique. I am a strong advocate of making every endeavor to secure anatomically correct reposition, but in most cases it can not be done. This does not preclude good function except in certain fractures. This point is not sufficiently stressed by the men who write about fractures, though it is a highly important one to the profession.

Spiral fractures are difficult to reduce to correct anatomic replacement even with open operation unless this is done before muscular contracture has set in.

With good length, reduction without too much displacement, by which I mean the axis of each of the fragments are parallel and are not widely separated, and with good union, excellent function can be anticipated provided the soft parts are given proper care.

The principle involved in closed reduction is rotation of the distal fragment until the normal anatomic landmarks are in correct relation as compared with the uninjured limb. In regions where the upper fragment cannot be held in rigid control, the distal fragment is held in normal relation to the proximal fragment's position of normal muscular repose. If over-riding exists traction must be combined with retention.

The best means of retention is by plaster bandages, where they can be used. I use them in the form of a nonpadded splint encasement. In compound fractures by external violence, either skin or skeletal traction is usually called

for and rotation is controlled by weights acting over pulleys upon adhesive or glued attachments to the distal levers.

While Dr. Collins was still a member of the staff we worked out a form of traction device to apply skeletal traction to the malleoli in low tibial spirals. Fracture of the metacarpals can be treated only by traction.

I have not dwelt upon the detailed treatment of these fractures as they occur in the different regions of the body, because of the limited time, and have only attempted to call attention to points which may help you to visualize the limitations of treatment.

*My rule is:* (1) Anatomic reduction. (2) Immobilization by a nonconstrictive dressing. (3) Prevention of swelling by elevation.

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### MODERN METHODS IN THE CONTROL OF MEASLES, DIPHTHERIA AND SCARLET FEVER.

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(Read, March 22, 1926, before the Associated Physicians of Montclair.)

I appreciate very greatly the privilege of being with you this evening to discuss modern methods for the control of measles, diphtheria and scarlet fever. I appreciate this privilege particularly because I was intimately connected with the development of some of the earlier researches which laid the foundation for later work in the control of at least two of these diseases, namely, measles and diphtheria. I have also been deeply engaged in the practical working out of the researches by Drs. George F. and Gladys H. Dick, for the preparation of scarlet fever toxin for the Dick test and for active immunization, and scarlet fever anti-toxin for the treatment of scarlet fever.

#### MEASLES.

In 1924, there were reported 511,305 cases of measles, with 8370 deaths, in 47 of the 48 States of the Union. This gives a case mor-

tality of 1.64%. When we take into consideration that, in addition to the more than 8000 deaths as a direct result of measles, there were probably an equal, if not a greater, number who died of complications and sequels, it will readily be seen that measles is a serious factor in our mortality reports.

Modern methods for the control of measles began with the work of Anderson and Goldenberger in 1910, when for the first time they produced experimental measles in the lower animals. They succeeded in producing measles in monkeys by inoculation with blood taken from cases of measles during the preëruptive and early eruptive period, and also by inoculation of monkeys with the nasal and throat secretions from cases of measles during the early eruptive period of the disease. They showed that animals which had passed through an attack of measles were immune to subsequent attacks. They showed also that the scales were noninfectious and that the disease was most infectious during the late preëruptive and early eruptive stages. They established quite definitely the period of infectivity of the disease as terminating, as a rule, at the time of the disappearance of the eruption. Based on their work, progressive health officers have modified their procedures against measles.

In 1918, Nicoll and Conseil published their work on the use of convalescent or immune serum for the prevention of measles, and since then there have been reports from many others attesting to its value. Nicoll and Conseil and others have shown that the injection of blood from recently recovered cases of measles into an individual who had been exposed a few days previously to measles confers protection in the great majority of cases. The consensus of opinion is to the effect that the approved time for the collection of convalescent blood is from the sixth to the tenth day after the temperature has become normal. The blood may be collected and allowed to clot or it may be citrated. The immune serum is used in quantities of 2.5 c.c. for those who have been exposed 4 days previously; 5 c.c. for those who have been exposed from 5 to 6 days, and 7 c.c. for those who have been exposed 7 to 8 days previously. Apparently, protection lasts 4 to

5 weeks; but, being a passive immunity, it passes away after that time. Use of the method is limited because the only source of convalescent serum up to this time is from human beings who have recovered from measles.

The recent work of Tunncliffe and her colleagues has suggested that it may be possible to protect persons recently exposed to measles by the use of serum from goats treated with a green producing diplococcus which has been thought by Tunncliffe and her associates to have an etiologic relationship to measles. This work is still in the experimental stage but holds great promise for the future.

#### DIPHTHERIA.

In 1924, according to government reports, there were in 47 states 119,831 cases of diphtheria, with 9756 deaths, or a percentage mortality of 8.19%. It will no doubt appear surprising to you that in spite of the proved value of diphtheria antitoxin and the conclusive demonstration as to the efficacy of methods for the prevention of diphtheria, that there should still be about 10,000 deaths annually in the United States from this disease. It is true that there has been a very definite decrease in the prevalence of diphtheria in the United States for the past 3 years, and undoubtedly this decrease can be attributed in part to increased use of the Schick test and of diphtheria toxin-antitoxin mixture. After diphtheria antitoxin came into widespread use, following its introduction in 1894, there was a marked decrease in the mortality of this disease, but no greater impress was made on the morbidity rate until the introduction and widespread use of throat cultures for the diagnosis of diphtheria and determination of carriers, the use of the Schick test for the determination of susceptibles, and toxin-antitoxin mixture for the active immunization of susceptibles. With introduction of these means there began a fall in the morbidity rate, which has continued with slight remission until 3 years ago when there was a very definite continued decrease in the prevalence of diphtheria.

The Schick test is an intracutaneous test to determine if an individual is susceptible to diphtheria. There are several important points in connection with the Schick test which should be borne in mind. One is the fact that the



toxin should be kept undiluted until immediately before use, and no diluted toxin should be used more than 12 hours after its dilution. It is important that the injection be made in the superficial layers of the skin, taking care that the small wheal made by the intracutaneous injection of the toxin does not become punctured and permit seepage to take place. Some workers use a control test by the injection of toxin which has been heated to 75°C. for 5 minutes, the object being to aid in eliminating false reactions from true reactions when readings are taken. Many workers omit the control tests, as there is always some doubt about interpretation of the reaction. It is much safer to give an occasional immune person toxin-antitoxin than to miss one who is not immune. A weak reaction is best interpreted at the end of 72 hours. If the reaction is negative, all that will be seen at the site of injection will be a pin point redness due to the slight wound made by the needle; such individuals are immune to diphtheria. A positive reaction consists of a dusky red circumscribed area about the size of a quarter that is persistent and that fades out in the course of 1 or 2 weeks, leaving a brownish pigmented area with desquamation. A pseudo-reaction has usually passed its height at the end of 72 hours, whereas a true Schick reaction is at its maximum at this time. A combined reaction offers considerable difficulty of interpretation but carries the distinguishing features of both reactions. If the Schick test is made with potent material and properly done, it may be considered as 100% accurate in determining susceptibility to diphtheria.

The number of positive reactions varies considerably in different age groups and in different classes of individuals, particularly as regards urban or rural residence and institutional life. The greatest percentage of positive reaction will be found in the age group from 6 months to 3 years and from 3 to 10 years; after 10 years of age the percentage of positive reactions to the Schick test shows a very decided drop. These results are in accord with the reported prevalence of diphtheria in different age groups—it being found that the great majority of cases of diphtheria occur in persons under 10 years of age. Lately,

there has been a tendency on the part of some to omit the use of the Schick test and to give diphtheria toxin-antitoxin to all individuals of school age or younger. Such procedure in my opinion is somewhat questionable except in the case of children 3 years of age and under in whom, on account of the large number of susceptibles, but little time would be lost in the immunization.

The Schick test is of especial value in those instances where there is a case of diphtheria in the family having a number of other children, or in institutions where there is an outbreak of diphtheria. In such instances, a positive Schick test enables the physician to separate those who may contract diphtheria from those who will not and to take the necessary steps for the protection of those found not to be immune. It has been predicted by some that the use of diphtheria toxin-antitoxin will result in the complete eradication of diphtheria from the United States; but such an end will not be reached until the physician doing general practice realizes the importance of immunizing every individual under 10 years of age by the administration of diphtheria toxin-antitoxin. Diphtheria toxin-antitoxin was brought into use by Von Behring in 1913, and since then has been used on a large scale by Park and his colleagues in New York, and by health officers generally throughout the country.

Up to 3 years ago, the major portion of the work with diphtheria toxin-antitoxin was in regard to the determination of the most satisfactory combination of the antitoxin and toxin. Various mixtures, containing varying amounts of toxin and antitoxin, were used until finally it was decided that a mixture containing 1/10 L plus dose of partially neutralized toxin, was, all things considered, the most satisfactory combination, and such a mixture has been practically the only one used since then. Diphtheria toxin-antitoxin consists of a mixture of diphtheria toxin and diphtheria antitoxin so adjusted that the injection of one human dose of this mixture into guinea-pigs of specified weight is without harm, while the injection of 5 human doses of this mixture results in death within 15 days after injection, in the majority of animals injected.

The injection of this mixture in a single human dose in the average individual is without harmful effects. The immunity following the administration of diphtheria toxin-antitoxin is an active immunity, and is comparatively slow in developing. According to the results of various observers, the height of immunity is reached within 3 months in 95% of individuals who have received the mixture. Undoubtedly, the administration of the first dose of diphtheria toxin-antitoxin stimulates the development of a certain amount of diphtheria antitoxin within a reasonably short time. Diphtheria toxin-antitoxin is given in 3 doses of 1 c.c. at intervals of a week. The dose and number of doses are the same for all ages. It is administered subcutaneously in the region of the upper arm. Diphtheria toxin-antitoxin should be administered to all infants of 6 months of age and to all susceptibles over that age period. There is a tendency to develop immunity to diphtheria as adult life is approached although a considerable number of adults, when given the Schick test, are shown to be susceptible to diphtheria. Investigations made by the N. Y. City Department of Health to determine the duration of immunity afforded by diphtheria toxin-antitoxin have shown that this immunity persists for at least 7 years, which is the longest period that cases have been kept under observation. Such immunity, so established, probably lasts for life.

#### SENSITIZATION FOLLOWING THE USE OF DIPHtheria TOXIN-ANTITOXIN.

Not infrequently the question is asked if there is danger after the administration of diphtheria toxin-antitoxin to asthmatics or those known to be sensitive to horse serum, and if the administration of diphtheria toxin-antitoxin will sensitize an individual to subsequent injections of horse serum such as would be contained in a dose of any therapeutic serum. When we consider that 1/10 L plus dose of diphtheria toxin-antitoxin contains practically no more protein than is used in an ordinary test for determining sensitivity to proteins, we realize that the injection of diphtheria toxin-antitoxin will probably not be followed by any untoward reactions. Bauer of Philadelphia has reported the administration of diphtheria toxin-antitoxin to a number of

individuals who are victims of asthma with no alarming symptoms following the injection. Local reactions occurred in a few, but they varied in no way from the reactions in those who were not known to be susceptible to horse protein. There is evidence to indicate that some individuals may be sensitized to subsequent injections of horse serum by the administration of diphtheria toxin-antitoxin, but the data is small and inconclusive. It certainly does not appear that the danger of sensitization by the injection of diphtheria toxin-antitoxin, or the fear of alarming reactions is sufficiently great to justify withholding the protection given by this procedure to those known to be susceptible to diphtheria.

Children under 6 years of age rarely show any reaction following the administration of diphtheria toxin-antitoxin mixture. As the age increases, however, the percentage of those developing reactions increases; but such reactions are usually light in character and quickly pass away. After completion of the course with diphtheria toxin-antitoxin, it is important that the individual should have the Schick test repeated to determine whether immunity has been achieved. This should be done in from 3 to 6 months after completion of the course of treatment. It is the general opinion that the administration of 3 doses of a properly prepared mixture of diphtheria toxin-antitoxin confers immunity as evidenced by negative Schick tests in about 90 to 95% of the individuals receiving the treatment.

#### DIPHtheria TOXOID OR ANATOXIN.

Some workers in England, as well as in this country, have recently been reporting results with the use of a modified diphtheria toxin as a substitute for toxin-antitoxin mixture. This preparation is known variously as toxoid, anatoxin, or modified diphtheria toxin, and is prepared by the addition of formaldehyde to freshly made diphtheria toxin. Certain tests are made to insure not only the harmlessness of the product when injected into human beings, but also to determine its antigenic properties. The results on the whole have been encouraging; but it is too soon to say whether diphtheria toxoid will supplant the use of toxin-antitoxin mixtures as a routine procedure in the prevention of diphtheria. The chief claim-



ed advantages of toxoid over toxin-antitoxin mixtures are that it contains no horse serum, and therefore will not sensitize to horse serum or cause reactions in those sensitive to horse serum; it is easier to make, and it is probably more stable.

This brief discussion of the methods for the control of diphtheria should serve to emphasize that our defense against diphtheria is in the early protection of young persons by the use of diphtheria toxin-antitoxin immunizations. Those not so protected must rely upon the early administration of diphtheria antitoxin for the developed disease and the use of antitoxin as a prophylactic measure for direct contacts whose susceptibility has not previously been determined. It should always be remembered that diphtheria antitoxin when given for prophylactic purposes only affords protection for a few weeks at the most, and it is therefore important in the control of diphtheria that we should know definitely the immunity status of each individual, and that all susceptibles should be made permanently immune by treatment with toxin-antitoxin mixtures.

#### SCARLET FEVER.

In 1924, there were reported 184,738 cases of scarlet fever with 3109 deaths in 47 states of the Union. This gives a case mortality of 1.59%, and while 3000 deaths from a preventable disease is a large number of itself, no account is taken in these figures of the large number of persons who have been permanently injured by reason of the sequels and complications of this dread disease. The prevalence of scarlet fever in the United States has shown a definite decrease for the past 10 years, and this in spite of the absence of any specific means for the prevention and treatment of the disease. The figures just recited, however, show that it is still a very serious menace and that it ranks fifth as the cause of death in the age group of 4 to 9 years. It is claimed that over 70% of the deaths from scarlet fever come in children before they reach their tenth birthday. Exact knowledge of the cause, prevention and treatment of scarlet fever began with the discovery by Doctors George F. and Gladys H. Dick, of Chicago, that this disease had been produced in volunteers by inoculation with

pure cultures of hemolytic streptococci isolated from cases of scarlet fever. Many observers had thought that the streptococcus so universally present in the throat of persons sick with scarlet fever was of some etiologic relationship, but, until the work of the Drs. Dick in 1923, Koch's postulates had not been fulfilled in regard to the relationship of streptococci to that disease. They succeeded in inducing scarlet fever in volunteers by the inoculation of the nasopharyngeal mucous membrane with cultures of hemolytic streptococci which they had isolated from the infected finger of a nurse in the care of cases of the disease. They demonstrated that the characteristic symptoms of the disease are caused by a specific toxin produced by scarlet fever streptococci, and that recovery and subsequent immunity are due to the production of the corresponding antitoxin. In a series of papers they report the discovery of the skin test to determine susceptibility to scarlet fever, the use of scarlet fever toxin for active immunization, and the production and use of antitoxin for passive immunity and for the treatment of scarlet fever.

About the same time, Dochez described a streptococcus serum prepared by the use of special methods in the immunization of horses which was also found to have antitoxic properties. Based upon the work, primarily and principally, of the Dicks, the diagnosis, treatment and prevention of scarlet fever may now be considered to be on a definitely established basis—as definite as the measures for the control of diphtheria. The use of the Dick test for determining susceptibility to the disease, of scarlet fever toxin for immunization, and the use of scarlet fever antitoxin for treatment, will not only make it possible to save many thousands of lives annually, but will also prevent untold suffering as a result of the complications and sequels.

The Dick test is a reliable clinical test to determine susceptibility to scarlet fever and the technic of performance is similar in every way to that of the Schick test, except that the reading of the Dick test should be made in 22-24 hours—particular care being taken not to interpret a slightly positive reaction as a negative one. It is the general experience that

more frequently a slightly positive Dick test is misinterpreted as a negative test than the reverse. A faint reddening 1 cm. or over in any diameter indicates on the part of the individual some degree of susceptibility to scarlet fever. A positive reaction usually begins to appear in from 4 to 6 hours after injection and reaches its maximum intensity in 18 to 36 hours. The reaction occurs in the early stages of scarlet fever in persons who have no history of the disease; but becomes less pronounced as the fever progresses. It is absent after recovery, and apparently for a long time afterward. All convalescent scarlet fever patients who have been tested show a negative or only slightly positive reaction. The Dick test causes less inflammation than does the Schick test and physicians who are familiar with the Schick test not infrequently interpret a positive Dick test as negative.

Extensive clinical trial has established ample evidence that active immunization with scarlet fever toxin is a logical and practical procedure. Immunity following an adequate dose of the toxin develops within 2 weeks after completion of the treatment and lasts for at least  $1\frac{1}{2}$  years (which is the longest period individuals have been under observation) and possibly for life. It is important in active immunization against scarlet fever that sufficient toxin be administered to immunize without producing harmful reactions, and in order to protect effectively against the disease that the administration of the toxin be continued to the point of a negative skin test. Over 95% of individuals who have received 40,000 or more skin test doses of the toxin show a negative Dick test when retested. The size of the first immunizing dose is important. It should be small enough to avoid severe reactions, and still sufficiently large to stimulate the production of antitoxin so that subsequent larger doses may be given without reactions. A first dose of 500 skin test doses, a second of 1500 skin test doses, and a considerably larger third and subsequent doses have been employed in a large number of persons without undesirable results. No bad effects have been reported from properly graduated immunizing doses. There is nearly always some reddening and local swelling, which appears in a few hours and begins to

subside in 18 to 48 hours. General reactions are comparatively uncommon and usually consist of some general malaise. The most severe reactions may be associated with nausea and fever. Transient scarlatinal rashes may follow the first dose in highly susceptible persons; but such reactions seldom follow any but the first dose. None of these reactions is as severe as those that sometimes occur during the course of immunization with typhoid vaccine.

Antistreptococcic serums have been available for use in scarlet fever since 1902, when Moser described his serum which was obtained by immunizing horses with live cultures of hemolytic streptococci. At intervals during the last 23 years, various antiscarlatinal serums have been reported, all of which have been prepared by immunizing horses with cultures of streptococci by methods that do not differ in principle from that used by Moser in 1902. These serums were not tested for antitoxin, but for bacterial antibodies. They have been used in the unconcentrated and unrefined state which resulted in frequent and severe serum reactions. This is one reason why such serums have gradually fallen into disuse.

In 1923, the demonstrations by Drs. George F. and Gladys H. Dick of the etiology of scarlet fever by means of human inoculation experiments and the discovery of the specific toxin of the disease and corresponding antitoxin laid a scientific foundation for the development of a specific, potent, and standardized scarlet fever antitoxin.

Antitoxin discovered by the Dicks was obtained by immunizing horses with sterile scarlet fever toxin and the antitoxic serum from these horses was concentrated not only to increase its potency but also to remove the non-essential proteins and thus avoid unnecessary frequent and severe serum reactions.

Since announcement of the discovery by the Dicks of scarlet fever antitoxin, sufficient time has elapsed to have it given a thorough clinical trial not only for passive immunization, but also for treatment of the developed disease. The results of administration of a properly prepared, standardized and concentrated scarlet fever antitoxin show definitely that when injected intramuscularly, it blanches the rash, lowers the temperature, improves the general



condition and, when given early, greatly diminishes the incidence of complications and sequels. The most striking results are obtained in those cases where antitoxin is administered within the first 3 days of illness, or in other words, when the rash is still appearing. The intravenous administration of adequate doses of scarlet fever antitoxin in such patients is frequently followed by a fall of the temperature to normal within less than 24 hours and a very marked diminution in the rash, if not its complete disappearance. The general symptoms of such patients also show a marked improvement. If the antitoxin is given intramuscularly, the therapeutic results, while not as rapid, are nevertheless equally striking. Occasionally, it is necessary that 2 doses of the antitoxin be administered. If the antitoxin is given within the first 3 days of illness, complications and sequels are usually avoided; but if complications and sequels have once developed, apparently the antitoxin can not remedy the damage already done. Therefore every effort should be made to administer the antitoxin early. Used prophylactically, in adequate dosage, the antitoxin prevents the development of scarlet fever in susceptible persons, even after infection has occurred. Such prophylactic use of the antitoxin should always be followed in 2 to 3 weeks by active immunization with graduated doses of scarlet fever toxin.

The Doctors Dick have noted that in many

instances an inadequate amount of scarlet fever antitoxin is used for passive immunity. Their basis for this criticism is the well known fact that most susceptibles who have been in contact with cases of scarlet fever, when seen by the physician, are already either in the late incubation period or early stages of scarlet fever, and that what such individuals need is not a small prophylactic dose, but a small therapeutic dose of scarlet fever antitoxin. They are inclined to believe that the failures which have followed the use of small doses of antitoxin for prophylactic purposes would have been avoided by the use of larger doses. Their rule has been to administer for prophylactic purposes one-half of the therapeutic dose.

Scarlet fever antitoxin is also of value in the diagnosis of those cases showing a rash but in which the diagnosis is otherwise uncertain. If 0.1 c.c. of concentrated scarlet fever antitoxin is injected intracutaneously into the reddened skin of suspected scarlet fever patients, there will occur after from 6 to 8 hours a permanent blanching several centimeters in diameter around the site of injection. The blanching may be a central red area surrounded by a white ring and is best observed at some distance from the patient. There will be no blanching of the area following the injection of antitoxin if the rash is not due to scarlet fever streptococci. This is what is known as the Schultz-Charlton phenomenon.

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## SYMPOSIUM ON INFECTIOUS DISEASES.

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**A Group of Four Papers Read at the Section on Medicine and Pediatrics, Academy of Medicine of Northern New Jersey, February 9, 1926.**

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### ACTIVITIES OF THE ISOLATION HOSPITAL.

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In the words of an eminent hospital authority, "The hospital occupies a strategic midposition and has open to it a great opportunity and a corresponding obligation, not as an institu-

tion for the salvage of human wreckage, but as a coördinator of activities, professional, economic and social, in their application to the problems of health". Whether the institution is a general hospital or one of a restricted nature such as the County Hospital for Contagious Diseases, in the broader aspect 3 primary functions are manifest and these are the caring for the sick, teaching about disease, and the study of disease. Only in so far as the institution realizes and accepts its obligations and

responsibilities, does it function in the truest sense.

These rather broad but basic principles have served as the foundation of our hospital activities, and by their application they give to this county a definite and concrete center for the advancement of the public health and welfare.

Adhering to these views, it was first essential that the County Hospital for Contagious Diseases should be everything that its name implies; that it should be rededicated solely to the care and treatment of contagion and infection—not a few of the most prevalent types but practically every known type that required hospitalization and isolation. Three hundred and fifty beds were available, and at first one-half of these were devoted to tuberculous infections. Yet, a special sanatorium had been provided for the hospitalization of this type and it seemed logical that it should care for all who were so afflicted. Unless this condition existed, it would be impossible to devote the entire bed capacity of the institution to contagion and infection as intended. Gradually our tuberculosis population was absorbed by the sanatorium, and with facilities improved and increased, the hospital expanded its scope of activities so as to embrace all forms of contagion and infection with little restriction. That a genuine demand for additional facilities in this special field really existed is indicated by results. Where it had been feasible to accept only scarlet fever, diphtheria, small-pox, poliomyelitis and cerebrospinal meningitis, at the present time the hospital is able to accept some 38 various types without taxing our accommodations. Doubling the ratio of beds to the population and widening the scope of hospital activities has apparently acted as a stimulus for hospitalization of the many forms of contagion or infection. Those intimately concerned with the public health are consistently prevailing upon us to include in our service the care and treatment of venereal and incurable diseases.

Agreeing with our hospital authority, that the institution should act as a coördinator of activities, the hospital has endeavored to do so whenever the occasion warranted. One manner of doing this has been the providing of

adequate observation facilities for the benefit of the medical profession. This particular activity has, or should have, proved of value to the practicing members of the profession, and at the same time the institution is furnished with the "salt" of institutional study and work by the larger admission of cases for observation.

A close coördination between general hospitals and the contagious hospital has proved mutually advantageous, and has developed a function of the hospital which should have no restriction. General hospitals, as we know, constantly are faced with the menace of communicable diseases developing within their confines and they must have ready access to, or possess, the proper facilities to cope with this problem. The contagious hospital does not desire to limit in any way the scope of its activities when it can be of assistance to the general hospital. That they are appreciative of having such service at their call is indicated by their fine spirit of reciprocation extended in return.

No activities of the contagious hospital can overshadow those which must be centered upon the maintenance of a low death rate and a low percentage of mixed infections developing in the hospital. In a certain sense these two factors reflect the manner in which the hospital is functioning. The saving of human life is naturally the foremost activity of any institution, and stabilizing of the death rate can be achieved to a certain extent, judging by comparison. For the past 3 years the net average death rate for all diseases accepted has been as follows: 3.2% in 1923; 3.6% in 1924, and 2.9% in 1925. Any great fluctuation, particularly upward, would seem to call for special explanation, yet upon analysis of these rates certain information may be gained which would lead us to think that they might be lowered. Scarlet fever it would seem has reached a minimum death rate; never going higher than 1.3% or lower than 0.4% in the period of time aforementioned. Not so, however, with diphtheria. Over a period of the last 5 years, the net average death rate for this disease has been as follows: 6.1%; 11.8%; 4.2%; 6.3%; 7.4%, and 6.1% in 1925. On the whole, diphtheria seems to be on the decline, judged by the number seeking admis-



sion, but on the contrary, those cases received are of a severe type. Any decline in diphtheria may be traceable to the extensive use of present-day methods of prevention and control. On the other hand, an increase in severity of type would seem to indicate a lax education on the part of the patients' relatives or guardians. To support this assertion we have, by close observation, determined from statistics covering 3 years, that in one-half the number of diphtheria cases having a fatal termination patients are moribund on admission. Seriously complicated as these cases frequently are, the institution is powerless to prevent the existence of such a condition, and can recommend nothing but a more extensive education in the progressive branches of medicine, or compulsory legislation. Time permitting, the analysis of death rates for the other diseases might be carried on. Certain therapies have been advanced which, when perfected and proven efficacious, should have an appreciable effect upon scarlet fever and measles in particular, not only from the standpoint of mortality, but of control and prevention.

Mixed infections are the bane of life in a contagious hospital. Their persistence provides an activity that the hospital cannot avoid, much as it would like to. However, the hospital can, to a very great extent, insure its very reputation, by adopting every known means for the prevention and control of this menace. Preventive medicine, reception wards permitting isolation for incubation periods, cubicles for proper segregation, efficient sterilization, and a morale and discipline which will eliminate as nearly as possible errors of omission or commission, are agencies that will aid immensely in reducing mixed infections to a minimum. That has been the experience of our hospital and we never allow this activity to pause.

In the field of teaching, the hospital can do valuable work through the medium of the follow-up system. The fundamentals of personal hygiene with relation to postcontagion are inculcated. In fact, this feature of the hospital activities has opened a still greater field concerning which a great deal might be said; it has demonstrated the opportunity as well as the need for a greater study of postcontagion.

The study of disease is another activity

which best presents itself in an institution such as ours where there is a wealth of material. In this direction, measures have been initiated and pursued, of an experimental and laboratory nature, and our efforts have been furthered by the establishment of consulting and attending staffs, and by the aid of representatives of experimental and research laboratories, to whom we are indebted.

In this paper we will not attempt to give a comprehensive discussion of differential diagnosis, as this will be so ably done by Drs. Wallhauser, Newman and Gardam, but, rather, relate our cases according to the frequency with which they occur in our experience.

The diagnosis of a well developed and frank case of scarlet fever is not difficult when the patient gives a history of recent exposure, followed by sudden onset of general malaise, sore throat, headache, vomiting and within 24 hours a diffuse red eruption beginning on the chest and spreading rapidly upward to the neck and downward over the entire trunk and extremities. But, when associated with one or more infectious diseases, which is not rare, or in a decidedly mild case, the symptom complex is not always so clear. Our latest teaching is that scarlet fever is due to invasion through the nasopharynx by one of the strains of the *Streptococcus hemolyticus*. We believe this is undoubtedly the etiologic factor generally. However, in the so-called surgical and puerperal scarlet fever, where the focus of infection is not in the nasopharynx, the character of the rash is not the same and usually begins near the site of focus instead of on the chest. The throat symptoms are many times wanting and, if present, show only in a mild degree. The rash usually fades within 24 to 48 hours, the temperature becomes normal by the second day, and desquamation begins very early, about the fifth or eighth day and at the site where the rash first appeared instead of the finger desquamation which is so pathognomonic. Is this a true scarlet fever, or is this an expression of streptococcic infection other than that specific strain of the *Streptococcus hemolyticus*?

The Dick test on all surgical cases has been positive on admission and either positive or plus-minus when tested the second time any-

where from the eighteenth to the twenty-first day of the disease. This led us to believe that the individual was not actively immune which we are taught would have been the case had the patient passed through a true attack of scarlet fever. On the other hand, our true scarlets showed a positive Dick test on admission and a negative some 18 to 21 days subsequently, with the exception of 3 cases which were Dick positive on admission and also Dick positive on the eighteenth day. These patients had a reinfection of the disease during the fourth week, and when tested the third time, say 15 days subsequent to their reinfection, they gave a negative reaction.

Another question is that of the relationship between scarlet fever and septic throat. Several men believe that the septic throat is caused by the *Streptococcus hemolyticus*. Clinically, the septic throat is red, congested, swollen and painful, and in many instances the condition is the same as we see in our scarlet fever throats except for the exanthem. All our patients with a septic throat desquamated.

As to the serum treatment of scarlet fever, our results are somewhat disappointing and do not compare favorably with other reports. Out of 566 cases of scarlet fever admitted in 1925, we have selected 100 cases, 50 of which were treated with serum and 50 did not have the serum. Comparison demonstrated that the general course of the disease was somewhat less stormy in those that had the antitoxin. Their temperature reached normal on the sixth day of the disease, which was 3 days subsequent to the injection, while those that did not have it reached normal on the eighth day of the disease. We noted that the rash disappeared on the average of 2 days sooner in those treated with the serum. It must be remembered that in some cases the temperature was undoubtedly kept above normal by the antitoxin itself, especially so when there was a serum reaction. This occurred in 8 cases out of 50 tabulated.

When we consider the complications of scarlet fever, we find the ratio of the specifically treated to the ordinarily treated to be 3 to 5. We also noted the complications in the serum-treated to be of mild nature, such as enlargement of the cervical glands or an occasional

otitis media which did not develop mastoid; none from this group had any kidney complication whatsoever. In the severe and septic cases we gave the antitoxin intravenously. One point we noted was that the antitoxin had no effect on complications if they developed before its administration. About 16% of the cases treated had a profuse serum rash developing anywhere from the fifth to the seventh day after the injection. We found that aspirin in appropriate doses every 3 hours, for 5 doses lessened the severity.

As a prophylaxis against the mixed infection of measles we have found the convalescent serum not valuable. In spite of all that we can do, there are times when a scarlet fever patient is admitted in the incubating stage of measles. Even though he is detected before the rash is apparent and immediately transferred, he has undoubtedly done considerable harm to those remaining in his cubicle. During our busy season it is not easy to isolate the wards for a period of 14 days pending an outbreak. Therefore the place is thoroughly cleaned and all susceptible and exposed persons are given from 6 to 10 c.c. of the convalescent serum; with the result that, so far, none of those treated have developed the disease.

Small-pox is a subject for legitimate regret, especially so a century after the introduction of vaccination. It is an interesting and curious comment on our boasted civilization that with the means at our disposal for absolutely preventing small-pox, we allow the prejudices of a small minority to still expose the country to not infrequent outbreaks of this repulsive disease. Therefore, small-pox will continue to be with us. I firmly believe that every child should be vaccinated before the age of six months and revaccinated at stated intervals.

Ranking in the same high degree of infectiousness as small-pox and measles, is that disease so often considered as minor, chicken-pox. The extreme infectious nature of these diseases confirms us in the conviction that they cannot be suitably isolated by means of cubicles. Such being the case, bed isolation as practiced with the other diseases, is out of the question. It would seem consistent that the possibility of aerial transmission might be allowed for in view of the wonderful results obtained in the



contact nursing of other contagious and infectious diseases. Our own hospital experience has been along these lines, and we can readily understand why measles and chicken-pox, in particular as children's diseases, are so prevalent in epidemic form. Time and again the community has been subjected to recurrence of epidemics of contagious and infectious diseases despite all that can be done. The frequency with which they occur emphasizes the importance of hospitalization as a factor in the control and alleviation of these outbreaks.

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## DIFFERENTIATION OF SMALL-POX FROM CHICKEN-POX.

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Small-pox and chicken-pox, like all infectious and contagious diseases, usually present prodromal symptoms, fever, chilliness, anorexia, nausea, headache and backache, varying in intensity; the intensity not always being indicative of the severity of the approaching disease. Usually the adult suffers more keenly from these premonitory disturbances.

In some cases the prodromal symptoms are so slight that neither the patient nor the attendant is aware of their occurrence. The prodromal symptoms of chicken-pox, particularly in adults, are often more marked than are seen in mild cases of small-pox.

A prodromal rash occurs in both chicken-pox and small-pox. Up to a very few years ago, the skin manifestations of both diseases, and their differentiation as described in textbooks were meager and inexact. "Chicken-pox and small-pox may be confounded. Indeed, sometimes it is not easy to distinguish between them, though in well defined cases of varicella the more vesicular character of their pustules, their irregularity, the short stage of invasion, the slight constitutional disturbance, and the greater intensity of the rash on the trunk, should make the diagnosis clear." (Osler, 1st Ed.,

1892.) "Scattered papulovesicles, and vesicopustular lesions appearing after a high fever, and pursuing a period of resolution longer than 48 hours, should awaken suspicion. Superficial lesions, on the contrary, distinctly vesicular on the third day, or co-mingled with minute, very superficial pustules, should be regarded as characteristic of varicella." (Pepper, 1st Ed., 1885.)

Niemeyer in 1881 made the statement that many still consider varicella as identical with variola.

Today, I doubt if there be a single physician who believes that these diseases are identical. The statement that adults rarely have chicken-pox is decidedly inexact. Personally, I see as many cases of chicken-pox in adults as I do in children; by this statement I do not infer that the occurrence of chicken-pox in adults is as frequent as in children, but can be explained by the fact that when it occurs in children and is fairly typical, it excites no comment, whereas when an adult is affected the family usually becomes perturbed and the attending physician is always ready to relieve their anxiety by calling a consultant to confirm the diagnosis. I recall 3 cases in adults above 45 years of age, one of whom was a colored man aged 57, unvaccinated; in none of these cases was there any difficulty in arriving at a positive diagnosis of chicken-pox.

A number of authors speak of cases of small-pox "sine eruptione". I have been unable to locate any positive report of such a case; if during an epidemic a patient known to have been exposed to small-pox, has prodromal symptoms such as occur in small-pox, I feel that you would be justified in treating him as a case although I can not conceive how one would be in a position to make a positive diagnosis.

Schanberg (1902) mentions that he has seen several cases of undoubted small-pox with but a single lesion upon the skin; this statement I know to be a fact. Some years ago a physician attendant at a clinic with which I was connected was exposed to a case of small-pox, was taken with the symptomatology of the prodroma of small-pox, and developed a single lesion at the base of his left thumb. The diagnostician of the N. Y. Board of Health made

a positive diagnosis and he was removed to the hospital. The doctor and all who had seen him never for a moment doubted the diagnosis. Another similar case that I had the opportunity of seeing was in a nearby county; this patient had 3 pocks—1 over prominence of his nose; 1 on the forearm, radial side, and 1 at the base of the proximal phalanx of his middle finger. This patient was not removed to a hospital. It was difficult to understand how a patient with but 3 lesions could suffer from such severe headache, such intense photophobia, and complete anorexia as was manifested in this case.

These cases just mentioned are types of small-pox that were in former years called varioloid, but a better term would be "modified small-pox". There are various degrees of modification; in the cases cited the patients suffered greatly from systemic disturbances, but, on the other hand, we meet with the so-called walking cases, the most dangerous of all to the community.

A colored man walked into a clinic in New York City with a pustular rash on his face. He denied any prodromal symptoms, had no fever and did not look ill, but on examination and count there were 85 pustules on his face; not another one on any part of his body. The 17 doctors present, all of whom had experience in skin lesions, differed in opinion as to the case being one of small-pox. Those opposing the diagnosis gave as their reason that any case of small-pox having so many lesions upon the face should have a few on other parts of the body, particularly on hands or feet. A diagnostician of the Board of Health was called and he pronounced it a case of small-pox. A number of the doctors did not accept the diagnostician's opinion until 10 days later, when an unvaccinated baby, who had been present in the waiting room on the former occasion, was brought to the clinic with an unmistakable small-pox. These cases of modified small-pox are not uncommon during epidemics, but when they occur endemically and are unrecognized they constitute a serious menace to the community and often are the cause of an epidemic.

One attack of small-pox protects against subsequent infection in the vast majority of cases; remember, not in all cases, for I had

the opportunity of seeing one man, with scars from a former attack, having a second attack of small-pox; it was greatly modified and an ambulant case.

This brings us to the differentiation of small-pox and chicken-pox in the great majority of cases.

A point to be remembered is that in the vast majority of small-pox cases, the attending physician is called to see the patient prior to the eruption, as the prodromal symptoms are usually sufficient to require medical attention. Except in institutions, a physician is rarely called to see a case of chicken-pox until the eruption is fairly well developed. The prodromal rash in both diseases is essentially the same, differing only in extent and length of time before disappearance. These rashes may resemble measles, scarlatina, or, occasionally, urticaria and are only seen by those who have the opportunity of observing their cases from the very beginning of trouble. The eruption is the deciding point; this being the case, I make a study of the eruption before asking for or listening to any history; at the conclusion of this examination I am ready to ask for information to confirm or, very rarely, should it be necessary, to negate the diagnosis.

Place your patient in the very best light. If possible, strip him of all clothing; if not, expose him at first to the waist line, and later the lower portion of the body. Make a general survey as to distribution of rash, comparison of amount of eruption in various locations. Are the individual lesions more to be noted over bony prominences or over soft tissues? Is there multiformity of lesions? In children under 7 years of age is there a typical vaccination scar? Are there any pits or scars from a previous small-pox? In small-pox the distribution is greater over the face and extremities; in chicken-pox the chest and back; while any part of the body may show a greater amount of eruption than the before mentioned locations, which are the sites of predilection. The presence of lesions on the palm and soles is not at all indicative of small-pox, for it is much more common in chicken-pox than a perusal of the literature would indicate. In chicken-pox there would be far more lesions on chest and abdomen compared to the number on face, arms



and legs; in small-pox vice versa. Where the bones are in close proximity to the skin such as the ridge of the nose, the forehead, the ribs, the radii, the covering skin is a favorite site for the lesions of small-pox; on the contrary, the hollows, such as between the ribs, above and below the clavicle and the front of the arms, are more apt to be involved in chicken-pox.

A short time ago I saw a girl 15 years of age with chicken-pox, whose eruption was very extensive on face, arms and legs compared to other parts of her body; she denied the application of any irritants; on questioning her, it was learned that 4 days before she had been to the sea-shore, worn a low-cut, sleeveless waist and had gone bare legged; she returned home with a sunburn on those parts where her eruption was so extensive. It is, therefore, important to recall that any medium that will cause increased vascularity of any portion of the body may, and usually does, cause an increase of the eruption and a predilection for those parts. This is observed more frequently in small-pox because of the fact that in the prodromal stage counter-irritants are frequently used for the headache and backache. A typical vaccination scar in a child under 7 years of age, scars or pits from a previous attack of small-pox, are presumptive but not positive evidence against small-pox; immunity has been attenuated or lost, so we may have an attack of "modified small-pox" as was determined in the case previously mentioned.

Thus far, we might say that we have given the case a gross examination; now, a more minute inspection is in order. Much stress has been laid upon the presence of multiform lesions. If we recall a few salient points, small-pox has a definite evolution: Prodromal rash, papules, vesicles, pustules and crusting, more or less in a definite order of time. Appearing on the face, first day; neck, second day; chest, back and extremities, third and fourth day. Chicken-pox usually appears first on the back or face, but other regions may be the site of its appearance, whence there is irregular extension. Bearing this in mind, it is important not to compare the eruption with that upon the back or chest or extremities; if so, you naturally would have lesions in different stages of evolution. Take a space on the

back or chest from 3 to 4 inches square and note the lesions there present; if multiformity exists, that helps considerably in coming to the positive conclusion that you are dealing with chicken-pox. Let us examine a vesicle: Is the vesicle situated on clear skin or upon an elongated or rounded area of erythema? Is the vesicle umbilicated or does it only appear so because of its situation in relation to a hair? Is it superficial? Is it covered by a thick or thin wall of epidermis? Is the fluid clear or turbid? Is it multilocular? If the vesicle arises from a clear base, or an elongated erythematous base, we are probably dealing with chicken-pox. A true umbilication of the vesicle means small-pox. When the vesicle is superficial and ruptures by very slight pressure, and fluid escapes, we are dealing with chicken-pox. In small-pox, the vesicle is tough and oftentimes feels as hard as the papule, needs some pressure or pin prick to cause rupture, and even then the total contents do not escape because it is multilocular and there is no atrophy of its partitions. Many formerly regarded the vesicle of chicken-pox as unilocular because of its easy rupture, but the latest opinion is that it is multilocular, but ruptures easily and empties because of the exceeding thinness of its epithelial covering and atrophy of its partitions. A crystal-clear vesicle arising from the skin with absolutely no erythema around its base, rupturing with the slightest pressure; to my mind, if there be a positive sign, it is this. If the eruption be entirely pustular, there can be no confusion between chicken-pox and small-pox, although other diseases would deserve consideration.

It is evident that notwithstanding a thorough examination and painstaking efforts at differentiation, a case may appear in which a positive diagnosis can not be made at the time of the first examination; a subsequent examination the next day or the day after will often bring positive conclusion. If these examinations are not conclusive, remember that the error should be made on the safe side. The patient should be sent to the Isolation Hospital for observation and final diagnosis. All known methods of prophylaxis should be instituted for the protection of the public, which includes vaccination for every one who has been in contact with the case.

## DIPHTHERIA AND SCHICK TESTING.

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I have taken the liberty of changing the subject of this paper somewhat because I feel that talking about the technical end of diphtheria is old stuff. I also feel that the gentlemen gathered here are interested in the status of diphtheria in Newark and the effects of Schick testing in our own community. I shall endeavor to draw some conclusions from the figures on file in the Health Department of the City of Newark and compare them with one or two other municipalities.

In the period of 1915-20, prior to the use of the Schick test in Newark, this city had a total of 7564 cases of diphtheria with 345 deaths, giving an average of 1260 cases and 58 deaths per year. In 1920 the Department of Health started Schick testing in all the parochial schools, and in 1922 the Board of Education Medical Department started their Schick work in the public schools. In 1924, Newark had 575 cases of diphtheria with 39 deaths, and in 1925, 509 cases with 42 deaths. This latter figure is interesting in that it shows a higher death rate than the year previous, although the case rate was considerably lower.

Personally, I feel that the increased death rate can be accounted for by an increase in virulence in the disease but it may also be due to late diagnosis, insufficient antitoxin, or carelessness on the part of patients in not obtaining medical care or in not hospitalizing patients until they had become moribund. It has been my experience, together with that of Doctor Pringle, that the type of disease is changing and becoming more severe.

It may be well to compare Newark's figures with those of New York City and Auburn, New York, in both of which places, intensive Schick campaigns have been conducted.

New York City (approximate figures): Before Schick testing, cases 12,000, deaths 2000. Year 1925, cases 5500, deaths 570.

Auburn, N. Y., is a city of 35,000 population and for the period 1915-22 (8 years) the average number of deaths for diphtheria per

year was 9. In March, 1922, an intensive Schick campaign was conducted and in 1923 the number of deaths was 4; in 1924, 1; and in the last 21 months there have been no deaths. No other means than Schick testing and toxin-antitoxin immunization have been used to cut down the death rate.

A summary of 4 years Schick work in the parochial schools of Newark can be readily shown in the following table:

School population, 15,130.

Schick tested and immunized, 8086, 54%.

Schick positives, 3549, 45%.

Schick negatives, 4537, 55%.

The Board of Education, in figures obtained from Dr. H. L. Fuerstman, controls a school population of 70,000 and they have tested about 18,000 children. Estimating the number of children in orphanages, day nurseries, etc., and those who have been tested by private physicians, I feel that Newark can say that about 29,000 children have been subjected to the Schick test and immunized.

If it is remembered that diphtheria is a disease most prevalent under the age of 15 years, it can readily be seen why Schick testing should be done. If we analyze our 42 deaths in 1925, we find that 22 deaths occurred under 5 years and 16 between 5 and 15 years of age. Therefore, our death rate is greatest in the children of preschool age. The schools are not Schick testing the children of preschool age because they do not reach them. I feel that it is the duty of every physician in the community to reach the children of preschool age and strongly advise the Schick test or toxin-antitoxin immunization. If we remember that 70% of the children under 5 years will give a positive Schick, we can proceed to immunize them without delay. The average practitioner hesitates because he feels that he may read a reaction incorrectly or that it is difficult to prepare an intracutaneous injection.

With the preschool children it is unnecessary to test or use any special technic. Three single subcutaneous injections of toxin-antitoxin at weekly intervals, given in the same way and manner as any ordinary hypodermic injection is all that is required. You may inquire, are there no harmful reactions? No.



The young children take toxin-antitoxin better than the older children or adults; in the latter, some reactions (local or general) may occur, but in the young children I have not seen any reaction that did not clear in 24 hours of its own accord. The material we have used is that furnished by the New York Health Department. The Newark Health Department will furnish Schick material and toxin-antitoxin free of charge to any physician who desires the same, in any quantity, and as often as requested.

It is to be remembered that it takes from 6 weeks to 3 months to develop immunity after toxin-antitoxin dosage.

If I can only impress the physicians of this community with the importance and need of immunizing the preschool child and that the burden is his, I will feel that I have accomplished a great deal.

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## SCARLET FEVER AND MEASLES.

EDWARD E. WORL, M.D.,

Newark, N. J.

To give any full account of these diseases in the limited time assigned, would be impossible. It is only possible to touch on some phases, more particularly on the practical side, as they appear to the physician in his family practice.

Scarlet fever has various names, none of which are perfectly satisfactory. I do not use the word scarlatina but I have known patients to interpret it as a light form of the disease. The books describe the course of the disease or give a definition that is too broad; they give description rather than definition. To me, scarlet fever means lymphatic fever or glandular fever with a certain eruption which can be analyzed into two parts, namely, an erythema and a punctate or papular form. Unfortunately, either element may be absent or ill-defined.

The tint of the skin must be considered; blondes show the eruption best; it darkens to a dusky brick-red in the brunette, and is not scar-

let at all in a coal-black negro who looks "peppered" or ashy grey. Luckily, we are not often called upon in this regard, for we have 6 cases in the white to 1 in the black race. Scarlet fever, then, is a white man's disease; European disease rather than Asian or African.

Thomas Sydenham, in 1670, described it; he seemed hardly to consider it a disease; he didn't mention the sore throat. We can only explain this by the fact that he was dealing with the mild, shadowy cases so common today and did not meet with the severe and septic forms which add terror to the disease. One writer said years ago that the throat seldom needs treatment. I would reverse his rule and say that the throat should always be treated, for here is the "fons et origo" of the disease.

Thirty years ago, Dr. Stickler, of Orange, had the idea of inoculation with mucus from the throat of recent cases. He proved the virulence of secretion from mouth and pharynx, produced some severe cases, and shortened the incubation period to the vanishing point. I think the method can be so modified, by future work along this line, that the patient can be immunized or subjected to a mild form of the disease.

Hughes' Compend says that the contagion of scarlet fever is chiefly in the desquamated epithelium. This is not true, it is in the discharges of the patient and the epithelium of the skin, so apt to be soiled with these discharges. Who can be sure that the skin is aseptic? We must not forget that there is also internal desquamation from the trachea, the bronchi, intestines and kidneys. We must assume that the skin is infective if contaminated with the discharges.

The classical teaching formerly was that scarlet fever was divided into simple, septic and hemorrhagic types, and always began in 1 to 4 ways: Vomiting, sore throat, high fever or convulsions; that 90% were under 10 years of age; 95% under 15 years; leaving 5% for adult patients. But these distinctions no longer hold to the same degree and we must accept great changes in type. The percentage of adult cases has greatly increased and they are apt to begin with headache and slight fever.

Many cases do not show the rapidity of pulse expected and the low mortality is surprising.

The rash of scarlet fever does not go down the body with the same regularity that we see in measles and small-pox. Some people are totally immune and others have either a temporary or permanent immunity due to an attack. I remember a case where a physician, who had the disease in childhood, was repeatedly exposed to scarlet fever, and acquired, ultimately, a second and severe attack. Relapses are common but have to be distinguished from other conditions, for instance, erythema. I remember a case where, in the relapse, the eruption covered the parts not covered in the beginning of the disease, and the only explanation I can see is that the virus of the disease was not exhausted in the original attack.

The German writers call our attention to the fact that there is a distinct odor to the disease; some compare it to that acquired by keepers of wild beasts of carnivorous type, lions, etc. To me, there is a musty smell and a distinct tendency for the throat to roughen, especially in some pronounced cases where close contact is called for.

The striking distance of scarlet fever in the first state is not great; possibly not much over 3 feet. This is different in measles, where the striking distance is 6 feet or more. Scarlet fever is a limited, and measles a very diffusible, poison. That weather conditions affect scarlet fever, we can hardly doubt. It has its seasons of prevalence. It becomes stationary at 60° and at over 80° it tends to disappear. These weather conditions ought to be more carefully studied; we know for example that rheumatics are good barometers.

Reduced vitality and wounds predispose to scarlet fever. In cases where sorethroat is absent, the virus might have been introduced through the skin. The childbirth cases (many of which are sepsis cases only) still show the same susceptibility to the disease.

Ker says that second attacks sometimes occur; they are fairly common and third attacks possible, but not probable. There are wide differences of opinion on the causal factor, but the complications are certainly often due to invading pyogenic germs. Is the *Streptococcus hemolyticus* the cause? It must vary in mass or virulence for it has produced violent cases and it must conform to the criteria of being con-

stantly found to the exclusion of other possible factors.

Scarlet fever today is a difficult diagnosis. Serums and drugs imitate it; we may have to wait for desquamation to be sure; and there are vague cases impossible to be sure of. In considering desquamation, that of scarlet fever should have 3 characteristics: Time, order, persistence. As to time, 4 to 6 days on face; scales at 6 days on neck and upper chest; and subungual deviation (Schamberg) beginning at ends of fingers and showing the pinkish new skin, in 10 to 13 days. The general rule should be 2 weeks to the hands and 3 weeks to the feet.

We can aid the diagnosis by a determination of the leukocyte count of the blood. This should be considered corroborative rather than diagnostic. It is seen best at the close of incubation and in the first stage of the fever; it seems to depend on the intensity of the poison. To the leukocyte count we must add that of the corpuscles because the polymorphonuclears are largely increased. The eosinophiles are at first increased, then become normal or subnormal.

The glands, in scarlet fever, are diagnostically more useful than in measles. Those of the groin are commonly enlarged but are not important. So, too, with the cervical glands, but if we have a unilateral enlargement of axillary and epitrochlear glands it is almost diagnostic; but this occurs only in a minority of cases. The glands are of little avail if we are dealing with a very fat or ticklish patient.

#### MEASLES.

This disease with the odd name goes far back in history. It was long mixed with leprosy, small-pox and other diseases. We get the first European knowledge of it from the "Treatise on Small-pox and Measles" written by Rhazes of Bagdad. Notice how these 2 diseases have always been closely associated. Rhazes died old, blind and poor, a beggar at the gates of Bagdad.

A "mesler", in old French, means a leper; so, when Chaucer speaks of meslerie, he means leprosy. When Shakespeare (*Coriolanus*, Act III) speaks of measles, the commentator, Verplanck, says that he means leprosy. Not till leprosy disappeared from the Lazarettos of



Europe was the name confined to the disease we know today. The name of Keat carries weight in etymology. He says that measles mean little spots but we know from medical history that little spots include measles, scarlet fever, German measles and other diseases.

Under present methods, measles today is an uncontrollable disease, but it carries fearful possible results for the future: blindness, deafness and various conditions of chronic ill-health and tuberculosis. If you are to extirpate tuberculosis, you must begin with measles.

As in scarlet fever, so, too, there is here an odor, variously described. Ker quotes it as musty, while the German writers say a sweetish odor, in the first week.

It is possible for measles to present no eruption. These cases do occur, generally of mild type, but we have also the same thing in smallpox and scarlet fever. In scarlet fever, without eruption, the French (Trousseau quoted by Dieulafoy) call it "Defaced Scarlet Fever". We can compare it to an inscription on some antique tomb, part of which is effaced, but from the portion which remains we can tell the missing portion with a reasonable degree of certainty.

The measles desquamation is not so characteristic as that of scarlet fever but scarlet fever may have no desquamation. This occurs

in some adults and babies with a fine silky skin. The measles with no catarrh is hard to diagnose; generally it is confused with rubella, but the characteristic rash aids greatly. Second attacks are quite rare, but the giving of certain drugs and the serum treatments may produce to a rash closely resembling cases of measles without fever.

In the treatment of scarlet fever we frequently observe doctors and nurses with sore throat from contact with cases. Some of these throats are infectious and these individuals may possibly become carriers; at this time there should be tests made, tests of the throat and repeated examination of the urine.

In considering the treatment of these diseases, our city, Newark, faces great dangers, due to the number of apartment houses, and also the increasing number of furnished room houses. The latter should not only be licensed but inspected; they are not desirable places for contagious cases to develop. Another problem for the future is the question of carrier cases. We know most about diphtheria carriers and typhoid carriers, the latter a most dangerous type, but carriers probably exist in these other diseases; they pass out of the hands of the practicing physician and the epidemiologist of the future will have his energies and knowledge well tested, for this will be a most fertile field.

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### THE OLD WANDERER.

It's coming June, I ought to take the road,  
For San Francisco's quite some piece away;  
This spring, it seems most anything's a load—  
But then tomorrow is another day.

The ties and trestles rather get to me;  
I never thought that age would sap my pluck;  
But when a chap can't rightly hear or see,  
He jumps a foot at every passing truck.

It should be nice, along the little lanes,  
With berries, now, and quiet spots to rest—

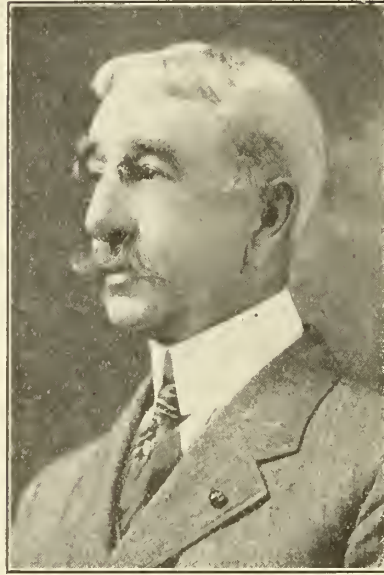
To doze a while and ease the aches and pains,  
Until the sun slants lower in the west.

My hikes are almost over, now, that's clear!  
I dare not ride the brake-beams any more,  
And in my mind is that besetting fear  
That I'll not reach the western ocean's shore.

I want the thump of surf, the tang of salt—  
I can't stay here to face next Winter's snow;  
I'll strike for Frisco and my final halt,  
The sun is up! It's time to stir; let's go!

(O. C. A. Child, in N. Y. Times.)

## In Memoriam



Adams, Charles Francis, of Hackensack, died April twenty-first, after an illness of several weeks duration.

Dr. Adams was born in New York City, March 18, 1857, the son of Rev. John Quincy Adams, a Baptist minister, and Caroline Elizabeth Quincy Adams, and was descended from an ancient line that counted royalty in its lineage. His early education was obtained from Mount Washington Institute, the Hudson River Institute and Brown University; the fact that he was "a Brown man" being one of the most jealously cherished incidents of his career. In 1884 he graduated from the New York Homeopathic Medical College, receiving second honors of his class. Later, he was a member of the Staff of Flower Hospital, New York, and of St. Mary's Hospital, Passaic, and also a Consultant at the Bergen County Hospital at Bergen Pines.

Dr. Adams was a public spirited citizen and served actively in many important capacities; as member of the Hackensack Board of Health, Trustee of the Johnson Public Library, member of the Board of Education, President of the Bergen County Medical Society, and Treasurer of the First Baptist Church. His love of music was one of his most pronounced passions, and through his ardor in this field the Gounod Society of his community was organized. He also was instrumental in forming an octet of male voices in the Men's Club of the Second Reformed Church and assisted in forwarding the musical interests of that church.

Dr. Adams was a student of the classics and possessed of a fine literary taste and style; his writings exhibited an unusual degree of culture. He belonged to the Kappa Delta Epsilon fraternity, and was a member of the Sons of the American Revolution.

### RITUAL OF THE BODY'S PASSING.

Though from the evening to the morning glowing  
No orb may rise nor orbit-song be clear,  
Where deeper need is shall be deeper knowing,  
Where music hides there shall be ears to hear.

Down from the arches of dream a thunder of wings  
Rolls, and forever along the inward sight,  
Out of the sorrowing cloud and blowing fear,  
With all the heavens rushing earthward, armed  
A lightning plunging from the homes of light  
Hints to the spirit that it stands unharmed.

(Ridgely Torrence.)



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Each member of the State Society is entitled to receive a copy of the JOURNAL every month. Any member failing to receive the paper will confer a favor by notifying the Chairman of the Publication Committee of the fact.

NOTE.—The transaction of business will be expedited, and prompt attention secured if,—

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## YOUR MOST IMPORTANT ENGAGEMENT.

(A Message from President Donohoe.)

Professor Osler at the time of his death was unquestionably the greatest medical teacher in the English or in any other tongue. Few men had been given to know more of medical practice and success than was his lot. He was an intensely practical man and thoroughly believed in and practiced the belief that the most important factor making for continued success in the practice of medicine was the regular attendance at medical society meetings. He valued this phase of medical education so highly that he spent much of his time in drafting medical theses for such meetings, and often stated, that from the discussion brought out at these meetings, he secured more instruction than he received from the preparation of the main paper.

Unfortunately, the meetings of the New Jersey State Medical Society are not always well attended. There are doubtless often cogent reasons that may on occasion prevent the attendance of country as well as city members. The meeting day comes around before one is aware of it.

After all, the world will be here behind us and the friendly hand shake, the renewal of old friendships and old associations, the momentary breath of freedom from cases and trials, the new idea spread on a fallow mind, each goes of itself to make for pleasant memories.

It is especially important that the "delegates" should all be present, yet from many counties never a delegate registers, or if they do, they come in by one train and register, only to rush back home again and do not take an active part in the meeting. The honor of election to the office of delegate should be considered a highly respected one. It is upon the delegates, as county representatives, that the whole structure of the society hinges and the vital matters on which our very existence depends is in their hands. There can be no political jockeying if all of the delegates come to the meeting.

Aside from the opportunities afforded every one to lay his complaints before the tribunal of his peers, one should spend at least one day in the Post-Graduate instruction which is so freely given; a day at the medical society meeting furnishes more concentrated Post-Graduate instruction than a like period spent in any other school of Graduate education in this country. The discussion brings to the forefront of the mind of the humblest practitioner, ideas and concepts that can exist in no other brain.

You, "delegates", owe your presence as a duty. You, "members", owe your presence to yourself, to your families and to the community, to show that you believe in this society and are willing to be counted as *members present*.

Why not let your most important professional engagement for the year be, the date of the State Society Meeting at Atlantic City?

This year the date will be June 17 to 19.

## SPECIAL FEATURES THIS MONTH.

It is pleasing to present another symposium composed entirely of papers prepared by our own members, this time 4 papers dealing with the common infectious diseases, and to have at the same time an independent paper upon some of these subjects by another member. Considering this matter of special importance just now because of the prospective campaign for curtailment of these diseases, we have also devoted our "Lighthouse Observations" to the same subject; abstracting for this purpose the very latest reports from two of the most eminent authorities. The whole series of articles may well be read in sequence.

All of the regular Journal "departments" are good this month and, in addition, we are starting a series of "Surveys" of medical conditions in the counties which should prove to be interesting in an historical sense. To a greater extent than ever before, this issue of the Journal probably holds some item of interest for each and every member.

## IS THERE NOTHING NEW UNDER THE SUN?

The above question recurs at this moment as the result of a recent experience. Having occasion to look back over some of the society records, we noted the following paragraph in the Minutes of the Annual Meeting, held at Trenton, November 11, 1823:

"The following resolution was offered by Dr. Condit, and was adopted:

"That the medical gentlemen now members of the legislature, and members of the Medical Society of New Jersey, be, and they are hereby requested to use their influence in procuring a modification of the laws regulating the practice of physic and surgery, so as to restrain irregular practitioners and pretenders in medicine from practicing, by inflicting such fines and penalties as may by them be deemed advisable, and that a committee of the medical gentlemen be appointed to confer with those members of the legislature."

The resolution quoted sounds quite as natural as if it had been presented but yesterday; and yet, that language was used almost a century and a half ago. Just how many times this resolution, or one of similar phraseology, has been adopted during the 160 years of the Society's existence we do not know, but we do know that such action has been frequently repeated and that numerous laws and amendments to these laws have been procured.

For more than 140 years, certainly, this Society has been engaged in the effort to restrain the charlatan, arrest the imposter and punish illegal practitioners, and we are inclined at times to wonder whether the results have justified all the labor expended. Indeed, we would like to suggest the appointment of a competent commission to investigate this whole question in a scientific manner. The main question would be—To what extent has legislation tended to limit the prevalence and the popularity of quacks? Naturally, a series of collateral questions would arise, each calling for careful study and each presenting points of deep concern to the legitimate medical practitioner and to the intelligent layman. A thorough investigation into all phases of the general subject might be productive of good results, and might help materially in determining whether, and to what extent, it is wise to continue such efforts.

Apparently, two or three things are obvious on superficial inspection: There has been a prolonged endeavor to secure legislation of a controlling character. Yet, the medical pretender is as rife in the land today as at any previous time in history; not only is the gross number of irregular practitioners as large as ever, but the relative number, in proportion to regular legally qualified physicians, is greater than at any former time. Restrictive legislation has not produced satisfactory results; at least not to the extent hoped for and desired.

If these things be even half true, would it not be well to study the situation with a view to determining accurately what the actual effect of all this labor has been and whether ultimate success lies in the direction of further effort or requires a change of procedure? In no other line do we continue contentedly to blindly repeat futile gestures. If a given formula is not productive of pleasing effects, it is discarded with reasonable promptness and a new plan is devised.

Of course, we know the argumentative "come back" to this assertion that legislation has not effectively curbed the charlatan; i. e. that such restrictive laws have at least succeeded in raising educational standards and have thus improved the quality of regular practitioners in the field. But even this sup-



posed effect of these laws has not been proved, and we seriously doubt whether the advancement made in medical educational standards can be in any marked degree attributed to such legislation. It may well be asked whether the improvement attained has not been purely the result of evolution in education.

Seriously, we would like to see some properly qualified board make an unbiased and unprejudiced study of this subject.

### NEW YORK'S MEDICAL PRACTICE ACT.

"An act to amend the public health law in relation to the practice of medicine", is the title of a new law, or perhaps we might better say a reconstructed law, enacted by the recent General Assembly of New York State and signed by Governor Albert E. Smith, with a commendatory message accompanying his signature. This new law is interesting to the profession at large in several particulars and should have an important bearing upon our local attitude with reference to future efforts to amend the medical practice act of this state.

In the first place, this law contains some new features, one of which, at least, has never before been embraced in medical legislation. The establishment of a "Grievance Committee", is a novel and perhaps a progressive step; providing a method akin to that so long in vogue with our State Bar Associations for dealing with irregular practices within the profession. This special committee is to be composed of 10 members appointed to the Board of Regents from candidates nominated by the several incorporated state medical societies, so that there shall be 4 members named by the regular state medical society, 2 by the state homeopathic society, 1 from the osteopathic society, and the Regents upon their own nomination shall appoint 3 members of conspicuous professional standing, but each member of the committee must be a duly licensed physician of the state. The act provides that this grievance committee shall have a large measure of jurisdiction over the professional conduct of all physicians and one of the significant sentences of Governor Smith's message, according to the press, consisted in his advice to the medical profession to promptly clean its own house; this in view

of the frequently heard charges of unethical conduct on the part of licensed physicians.

The second feature upon which much stress has been placed is that requiring annual registration of all practicing physicians. The initial registration must be effected through the secretary of the board of medical examiners, but subsequent registrations may be made through the secretary of the local medical societies by filing a properly endorsed form that is to be supplied direct to the physician by mail from the Regent's office. Each registered physician will receive, on the first of March in each year, a printed list of all duly registered physicians in the state, and will be invited to report the names of any known nonregistered practitioners. It has been contended that this will greatly facilitate recognition and prosecution of persons attempting to practice medicine without becoming properly licensed. The annual registration fee is \$2; the penalty for failing to comply with this portion of the law is \$1 for each 30 days or part thereof that one may be in default; and wilful refusal to comply subjects any licensed physician to a penalty of \$1 per day for the first 30 days and \$5 per day thereafter.

A third important factor in the law is the provision that use of the title "Doctor" (in an implied medical sense) by any person not lawfully licensed to practice medicine shall be considered a misdemeanor; and, the further provision that "display by any person of a sign or an advertisement bearing a name as practitioner of medicine in any manner or by implication or containing any other matter forbidden by law shall be *presumptive* evidence" of the practice of medicine. The last is qualified, however, as follows: "It shall be necessary to prove in any prosecution or hearing under this article only a single act prohibited by law or a single holding out or any attempt without proving a general course of conduct, in order to constitute a violation.

The above mentioned features are the essentially new elements in the law and it will be highly interesting to watch developments under their application and enforcement. The campaign to amend the old law in these particulars was carefully devised and skilfully conducted. The medical profession was fortunate in having this bill emanate from non-

professional sources; as stated by Governor Smith, the originators of the bill were well known to be two great Departments of the State Government, those of Education and of Health, and that its supporters were actuated solely by public health motives. That is the proper source of such legislation, and while the organized medical profession may well lend active support it should not be placed in the embarrassing position of initiating and sponsoring such measures, and of thus incurring the obloquy of the false charge of promoting selfish interest.

There may be for us several lessons to come from the passage and application of this law. Should it prove in time to be productive of all the good results its advocates have claimed in its behalf, it may serve as a model for improving our own state law; should any unexpected flaws be discovered, we may profit by the observation, and remedy such defects; already we may advisedly take into thoughtful consideration the methods by which this legislation was effected—particularly the factor of public education to the point where demand for its enactment came from other than medical sources interested in the preservation and safeguarding of the public health.

#### PROGRESS OF THE JOURNAL.

Development of the Journal during the past year has been in some respects phenomenal. It has doubled in size, as measured by number of words printed, and has considerably improved in quality. Four new and distinctive departments — Ethics, Economics, Esthetics and Lighthouse Observations—have become firmly established; and 2 new ones, Lay Mirror Reflections and Historic County Reviews, have been inaugurated. These special sections advance the idea of supplying each member monthly with something of personal interest.

You can materially aid in holding the Journal on its present high plane, or better still in advancing it further, by giving it personal support. Make it a rule to send us frequently some original scientific article, clinical case record, or a letter relating to medical topics of general interest. Do your own part toward improving the Journal and, above all, see that your county keeps abreast of the leading county societies in publishing its work.

## Medical Ethics

### ETHICS AND THE MEDICAL PROFESSION.

Richard C. Cabot, M.D., Boston, Mass.

(Reprinted from *Survey Graphic*,  
by permission.)

*Continued from May Journal.*

Most of the code contains nothing that is now under discussion, and since this article is concerned with current movements, rather than with settled customs in medical ethics, I will refer to only one matter.

The code is quite representative of medical opinion in its strong condemnation of "contract practice." At any rate, it certainly was so when it was written and no one could be certain of support in any proposition to rescind this condemnation today. But it is noticeable that the code is brief and vague when it comes to define what "contract practice" means. There is a good reason for this, for the attempt to define it would show that any viable definition must cover practices that are very widely recognized, certain to continue and strongly supported by many of us, though still silently frowned on by others.

"Contract practice" means medical services contracted for by a mutual insurance club, by a "lodge", by a manufacturing corporation, by the owners of a mine, by the managers of a department store, or by a concern such as the Life Extension Institute.

The doctor sells his services not directly to a patient, but to a club or a commercial organization which contracts for them in order to benefit the health of its members or employees. This action, it is contended, is commercializing the medical profession and bringing unfair competition to bear upon the private practitioner. For, the medical services thus contracted for are sold for a price which undercuts the lowest that the private physician can charge and still make a living.

At its worst this system is seen in the so-called "lodge" practice. Membership in a lodge or fraternal order carries with it the right to free treatment by the "lodge doctor" who is paid out of the lodge dues and must attend without fee, any member who is sick. The pay given to the lodge physician is so small and the number of patients whom he may have to attend is so great, that it is impossible for him to give good service, so that I think it is generally agreed by patients and physicians who know much about "lodge practice" that it represents the worst type of medical practice that exists. It is rendered still worse by the "political" maneuvering necessary for the doctors who compete to secure these positions



which, though so miserably paid, are much sought after because the pay, though small, is secure and because, by holding such position for a few years, the physician gets himself known and when he resigns can step into a better position than he had at the start.

This sort of practice is what "contract practice" originally meant and it is condemned, so far as I know, by all physicians, including those employed under it. It encourages disgracefully low standards of medical work, hurried and botched examinations, guesses at diagnosis, treatment that is a wretched farce.

But of late years, after the medical codes had sweepingly and justly condemned this sort of "contract practice" because it is bad not only for the physicians who have to compete with it, but for the patients treated under its agreement, there has sprung up the factory physician, the mine doctor, the doctor of a local health center, the department store physician with his assistants, his nurses, his well equipped clinic and laboratory and his quite sufficient salary. He is doing excellent work and he and those employing and those whom he treats are well satisfied with the arrangement.

Yet he is selling medical services not directly to a patient but to a commercial concern. He certainly is doing contract practice, and he certainly competes with the private practitioner. Much argument is spent to disprove this. It is contended that he is not treating but preventing disease, that his examinations and his advice are purely for hygienic purposes and that whenever a patient is actually ill, he is referred to his own private doctor and not treated by the company doctor. But the measure of truth in these contentions is not great. In the first place, accidents occurring in the factory are often treated by the factory physician (or nurse) and although the treatment is supposed to represent nothing but "first aid", and any subsequent treatment is supposed to be carried out by the family physician, first aid and the directions that go with it are sometimes all the aid that the patient needs. There is usually no after-care. Yet if the store physician or factory physician had not existed, some family physician would have earned a fee for attending to the injury. It is the same with the various "medical emergencies", such as "fainting fits", headaches, colds, cramps, etc., which are usually attended to at the plant. Some private physician loses a fee in many such cases.

But this is not all. For the factory or store managers are anxious not only to have illness properly treated when it occurs in their plants, but they are still more anxious to have it *prevented*. Endeavors are made in the plant to teach the employees to take care of themselves

so well that they shall not fall ill with anything like the ordinary frequency. In so far as they succeed in this, the employers, through the physicians in their pay, are depriving the private physician of his livelihood.

The difference between the "industrial physician" and the "lodge doctor" is that the former is well paid, does good work and does not *so obviously* compete with the private practitioner, while the latter is ill paid, cannot afford the time to do good work and is obviously a competitor. But even here the competition and the loss are not as great as they seem, for the "lodge doctor" is not called in many families if they think the trouble is at all serious; or, if called the first time, the lodge doctor is often soon superceded. So that I think the high-toned industrial physician really brings as much "unfair" competition to the private practitioner as the despised lodge doctor does. At any rate I remember that the "industrial physicians" were quite uncertain as to their ethical standing in the eyes of the rest of the profession when a few years ago they decided to form an Association of Industrial Physicians in which they could discuss the interests peculiar to their type of work.

This problem of "contract practice" brings out a peculiar feature of medical ethics: that in endeavoring to protect their group interests by rules against certain "unfair" practices, the physicians are likely at any moment to discover that they are acting against the public interest, against the protection of public health. No one defends "lodge practice", but everyone who has studied the subject dispassionately, defends and extols the work of the industrial physician, which is preventive but not *merely* preventive in its effects. So far as I know, the American Medical Association—which represents most of the physicians in the United States and is, on the whole, a very useful body—has never attacked industrial medicine. But, if the Association were consistent, it would attack it as it is now attacking another valuable agency for the preservation of health, namely, the Life Extension Institute.

The Life Extension Institute provides physical examination for supposedly healthy people, in order to forestall and prevent disease, just as we have an elevator examined periodically to make sure that it will not break down. Having made a good many such examinations myself, without striking benefit that I could see, I was sceptical of its being able to accomplish any positive benefits to health until I was convinced by the actuarial figures of the Metropolitan Life Insurance Company, which show that those who take yearly physical examinations and are given such hygienic advice as the results of examination indicate, live

longer than those who do not. Resting on these figures the Metropolitan now offers its policy holders free examinations by the physicians of the Life Extension Institute and pays for those examinations, believing that it saves money through the increased longevity of those so examined.

But the American Medical Association, through its Judicial Council, protests that these examinations are bad because they ought to be made by private physicians and not by physicians in the pay of any agency which might make money out of the transaction. We have just established a branch of the Institute in Boston and as a member of the group of physicians who are acting as its advisors and endeavoring to promote the public health through furthering these preventive measures, I fall under the condemnation of representative physicians, some of them men of the highest and most disinterested character and close personal friends of those whom they condemn. Their argument is that we are commercializing medical service because these examinations ought to be made by the private physician and because no profit ought to be made out of the transaction of examining a patient except by the physician who examines him. No layman ought to get anything out of it, for such laymen may not have the highest interests of the patient in view, but *may* be out chiefly for profit.

Of course all this could be said about the factories and stores employing industrial physicians to keep their employes well. They, too, might have merely commercial and not at all philanthropic aims. Why does not the Judicial Council of the American Medical Association condemn them too? I know no answer.

The fact that the Life Extension Institute has been losing money or barely coming out square is of course no proof that it *might* not some day make money and be run with money-making as its chief end. The fact that the examinations made in New York and Boston offices of the concern are preëminently thorough and accurate, does not guarantee that they always will be so, in the hands of this and of other similar companies which may spring up. This must be agreed to and as a check, I think that such companies as the Life Extension Institute should welcome (as that body does) periodic investigation of their methods by any properly constituted authority, such as state or federal health officers. Industrial corporations employing physicians, should also invite similar scrutiny and supervision.

But how would the private physician like to undergo a similar scrutiny of his records, his laboratory, his methods of examination? And

how would he come out under it? Would it be shown that he was always non-commercial, thorough, dispassionate, conscientious?

My impression, from a fairly extensive experience with private physicians' methods, leads me to believe that they would resent such a scrutiny, even if it involved no invasion of the patient's private affairs, and that they would not show up favorably in the art of physical, chemical or psychologic diagnosis. In the public clinics, in industrial establishments, and in the examining rooms of the Life Extension Institute, the check of comparison with others, the records and methods seen by others, the daily companionship and team-work with others who share the responsibility and contribute the advantage of their slightly different angle of vision, all tend to raise and to maintain high standards of work. The isolation of the private practitioner, on the other hand, makes it harder for him to attain and to keep up such standards. There need be no difference in innate ability, in medical school training, in conscientiousness or unselfishness between the private practitioner and the physician connected with a group of physicians in an institution like a factory, a public hospital, a dispensary or a life extension institute. The two sets of men might be identical in their original personal and professional attributes. But I believe anyone who has known both groups will have no hesitation in saying that, on the average, the private physician gives less efficient service, because he works under conditions unfavorable to the attainment and to the maintenance of good standards in medical technic.

The Massachusetts Medical Society considered this year the case of the Life Extension Institute recently established in Boston and though not at all enthusiastic about it, decided not to attempt any obstructive tactics. Recently, as I sat around a table with the orthodox and respectable group of doctors composing its advisory board (one of them since elected President of the Massachusetts Medical Society itself), I reflected, with satisfaction, on the change that had come about in the profession since the Committee on Ethics and Discipline of this same society publicly condemned me for advocating the same sort of experiments in public medical service that we of the Life Extension Institute's Advisory Board are now backing. Then, I was an abominable heretic, though advocating these same reforms; now, I have become almost orthodox; soon, I shall have become a matter of course.

In retrospect over 35 years' observation of the workings of ethics in the medical profession, I avoid any attempt to decide whether



we are getting better or getting worse. No such judgment can be better than a guess, colored by the last rumor or story that one has heard. What does seem to me clear is that a medical oath of allegiance and a written code of ethics, revised periodically, are of interest (1) as registering ethical advance—not often ethical retreat—and (2) as brakes on our natural tendencies to slip back. They bring medical ethics out into the open and make it less apt to become what G. Bernard Shaw called it, “a conspiracy against the public”.

But in medical men, as in all men, the strongest force for ethical advance has been, in my experience, the intimate contact with other medical men better than themselves, whereby by “osmosis” nobler habits of thought and action seep across from teacher to pupil, from chief to interne, from colleague to colleague without a word spoken on the subject.

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## Medical Economics

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### VENIT HESPERUS.

A twelvemonth past we were approached by the Editor and kindly but firmly invited to fill in a page of the Journal each month under the caption of “Medical Economics”. We inquired, what were medical economics? To which, the Editor replied at length but withal vaguely, and we said we thought so too—we didn’t know either. After some parley we agreed to assume the responsibility for the ensuing year, it must be admitted with a certain reluctance, and not uninfluenced by threats of exposure as a slacker. Soothed however, and not a little emboldened by our own ignorance of the subject (it seemed an opportunity to learn something—an opportunity which has proved ample, by the way), the task was undertaken, and we wish to go on record as having enjoyed it.

This enjoyment was enhanced because we have never felt that anyone would read the page anyhow; though we do know of two individuals who apparently glanced over it. One agreed with us; the other did not—decidedly not; and as ideas are put in print for the purpose of arousing discussion, we regard ourselves on the known figures to have been 50% successful.

We had hoped, ere the year was out, to have developed some information as to a definition of Medical Economics. None has been forthcoming and to any who may object to our choice of subjects we can only reply in the

language of an early patriot—If these be not Economics, make the most of it!

Native modesty forebade our signing the page; though this caused some discussion with the Editor, who, we fancy, for all his bold exterior, felt just a trifle shy. He, however, having won his first point, generously yielded to us in this. While giving credit to our own quality of modesty for this decision, we also must confess it has given us a feeling of almost editorial importance to have the page unsigned. Too, and not least of its advantages, there is the fact that if, at any time, one wants to hurl a brick, it is more safely done from behind a stone wall. Perhaps that is merely modesty, but the captious might term it inherent caution, or worse; at any rate, our observation during wartime was that it was a well recognized principle of action along the front. Our final and clinching argument was that if none were going to read it, why sign it anyway?

Were we writing a preface instead of a valedictory, we should like to have adopted one from a small volume we picked up not long ago, which fits rather well over what we have put down month by month. It ran something like this: “The following thoughts were not originally intended for publication. They were merely put down from time to time, much as a traveler, on his first voyage at sea, leans over the rail. He has nothing against the ocean, and he is not interested in fish culture; he simply has something he must give up”.

We have reserved our apologia for the end instead of placing it, as might properly have been done, at the beginning, thinking to time it with the confession of our identity. And now, *Venit Hesperus, ite capellae*—twilight falls, skip home little kids; the day’s work is over. We can only trust no rough spots have been left behind in too great need of sandpapering, and that none of our remarks have been received in any other spirit than that of an effort to bring up, and give impetus to, subjects needing discussion.

Criticism, we think, is more apt to be an expression of egoism than of altruism. It is an effort on the critic’s part to relieve certain of his own mental paresthesias aroused by chronic indigestion; and one gains an idea of the comparative success or failure of his family doctor’s ministrations, according as his criticisms are less or more caustic. Observing the game from the bleachers, the critic sees it as a whole, forgets too often his own participation in days gone by, and fails to make allowance for the dependence of individual effort on the player’s ability to react at the moment

to his environment. And it must never be forgotten that environment comprises both his immediate surroundings and the influence of things he has left at home.

The page has been, we fear, somewhat devoid of the lighter vein, for which we can only offer our apologies as we reveal ourself in saying farewell to indulgent readers as

Their most Obligated,  
Obedient, and  
Humble Servant,  
Dryasdust.

## Esthetics

### AN INTERPRETATION OF LIFE.

Some months ago, in April, 1925, to be exact, the Book Review Edition of the Literary Digest contained an interesting communication on this subject from the pen of Gabriel Wells. It is so good that we are taking the liberty of reproducing it for the consideration of our readers, who may not have had the opportunity of seeing the original.

"The most amazing spectacle in the universal procession of things is our lightsome attitude toward Life. Life is an illusion, Life is a dream, Life is a jest, are phrases often on our lips; and more momentous, not infrequently exemplified in our actions. Is it any wonder, then, that the stern laws of Life take their revenge?

"Strange, the various particular activities which go to the making of Life we do treat with becoming gravity. Whether it be business, or art, or science, or even sports, we normally approach these functions in a spirit of earnestness; but Life as a whole we treat with levity. Half the earnestness which we bestow upon the parts of Life, were we to transfer that to the *whole* of Life, it would set us on the road of a harmonious and purposeful living.

"But no, not always is flippancy our dominant mood. Times there are indeed when we stand in awe at the fact of Life. But the point is, we only turn solemn when we contemplate the course of Life, not at its stream, but at its two ends—the source and the cessation. Yet how illogical to spurn the thing for what it is, and then take to heart its arising and its passing, even to the verge of desolation! Nor is this attitude understandable as a matter of plain common sense. Not that I would deprecate or belittle the emotional value of lifting the veil of things. I only question the essentially determinative bearing of such attempts.

"Let me try to make my thought specifically clear. You witness a play. Is your appreciation of the merits of the performance determined by the circumstance of how you came into the theatre, or how you are going to leave it? The performance was either good, or it was not. It stands upon its own basis. Thus with Life. Life is *itself*—is neither that which precedes it, nor that which follows it. The coming hither and the going hence are not to be decisive factors in the determination of our behavior. Whether the Fundamentalists have it, or whether the Rationalists; whether we incline toward Darwin's theory of man's origin or toward the more flattering version endorsed by Mr. Byran, we must play the game of life according to its own inherent rules, or failure must be our lot, inevitably. Let me ask: Do we not expect a public servant, for instance, to fill his place worthily, be he appointed from above or elected from below?

"The entire difficulty with us humans lies in a misconception of the character of Life. We look upon Life as a gift. And as we tire of a gift, so of Life we tire. But Life is not a gift. Life is a loan, and like a loan is meant to be used productively; and, yes, to be repaid, and that with interest. And by thus conceiving of Life, substance is imparted to the thought that Life becomes what we make of it. Consider what effect upon our conduct it would have if we were to start each day with the idea impressed upon our mind that we are handling a loan and not a gift! Then, truly, would our guiding star forevermore be service.

"Greatly daring, I am now led to hazard a definition of Life. It is modeled upon Lincoln's classic definition of Democracy. *Life is existence in the whole, with the whole, and for the whole.* Otherwise express: To keep in line with the center of things—to be inspired with a sense of wholeness—that's Life.

"One word more. There are those who pronounce Life a Tragedy. If Life does prove a tragedy, is it not often because we acted as if it were a comedy? Life is neither Tragedy nor Comedy. Held in true perspective, Life is a Drama—a composition of connected acts where the elements of good and evil, of darkness and light zestfully intermingle; a construction whose inception and termination, as such, have no relevance. Development is all."

#### Facing Torture.

"There goes Granite Jaw, the glass eater," observed the circus clown, "and look at the expression he's wearing."

"Yes," replied the acrobat. "His wife is making him keep a date he made with the dentist."—(Am. Legion Weekly.)







The Old Somers' Mansion, Still in Excellent State of Preservation.



A Corner of Pine Rest Sanatorium.



Administration Building and One Wing of Atlantic City Isolation Hospital.



## County Medical Surveys

At the last Annual Meeting of the Medical Society of New Jersey, it was suggested that we proceed to collect material for the publication of a series of short journal articles, constituting a survey of each county, and for the ultimate preparation of a medical history of the state. It was contemplated that these surveys might be presented one each month, serially and in alphabetic order if possible, and that the object would be to show primarily what medical institutions exist in each county, and what medical men have done and are doing toward the betterment of mankind. Naturally, Atlantic County would head such a list and quite appropriately we have found it possible to publish the first of these surveys in the same issue that announces the coming visit of the State Society again to Atlantic County's most attractive spot—Atlantic City. Limited space at our command will compel us to condense the surveys, but, even so, we believe that a sufficient number of points may be touched upon, in even the smallest counties, to make these interesting contributions to a knowledge of medical affairs in the state, and it is hoped that such a presentation of the development all over the state may stimulate the more backward districts to emulate the successes of those more advanced.—*Editor.*

### MEDICAL SURVEY OF ATLANTIC COUNTY.

PHILIP MARVEL, M.D.,  
Atlantic City, New Jersey.

The early history of Atlantic County is intimately bound up with that of Gloucester, of which it was originally an organic part, and it is difficult, in consequence, to select such items as might reflect creditably upon the early residents of the Atlantic portion of "Old Gloucester". Furthermore, this section of the state was not settled and developed as early as the northern district because it was looked upon as impenetrable or uninhabitable, and was often referred to as "the wilds of west Jersey"; the terms east and west being applied then to the divisions of the state now recognized as north and south Jersey.

Once settlers did begin to invade this territory, however, progress was very rapid and the one-time wilderness of pine forests and deadly marsh lands, infested by wild animals and wilder and more dangerous pests in the form of mosquitoes and green flies, has become the "World's Play Ground" and the leading health resort of America.

In this development medical men have played

a leading rôle. It was, for instance, a physician, Dr. Jonathan Pitney, of Absecon, who founded Atlantic City and who was the prime mover in securing construction of the first railroad across this portion of the state—the old "Camden and Atlantic"—connecting Philadelphia with the coast. It appears to have been Pitney who drafted the railroad charter, who fought for its granting by the General Assembly, and who led in the combat against discouragements and hindrances until the road was completed and the first train run through on July 1, 1854.

It would be interesting to continue a detailed story of the parts played by physicians of the county in public life, political and military especially, but we shall have to pass that over with the mere statement that members of the profession have contributed their full share toward the development of community life and in the defense of the nation.

The first physician to have become a resident of Atlantic County seems to have been Dr. Richard Collins, a native of Ireland, who located in Galloway Township in 1765, one year before the organization of the State Medical Society. About the year 1799, Dr. Ezra Baker moved to Absecon from Tuckerton, and in 1800 Drs. Rénard and Ephraim Sawyer, said to have been descendants of Miles Stanish, located at Absecon. Advent of the Sawyer's was closely followed by that of Dr. Levi Rogers, in 1802, and Thomas W. Peck, in 1807, both of whom are affectionately remembered for their great success in dealing with an epidemic of typhoid fever, in 1813, along the "West Jersey" coast. It was in 1819 that Jonathan Pitney moved to Absecon from Morris County and for a period of 50 years thereafter he was the leading physician in the county. Shortly after taking up residence at Absecon, Pitney began to make visits to the shore and was soon impressed by the physical properties of the coast, its wonderful atmosphere, splendid southern exposure of the sand dunes through which surface waters readily percolated and upon which stagnant pools never formed, and he soon started publication of his convictions as to the remedial influence of this location and climate. In addition to projecting the future health resort—Atlantic City—and securing railroad communication with the rest of the world, he is accredited with having induced the national government to build a lighthouse on this beach; the Absecon light having been established at his instance in 1857.

In the early county days, Absecon and Somers Point were the principal villages; the latter having grown up on the site of the original homestead of Richard Somers, an-

cestor of Dr. Lewis Somers who began practice in 1832. Among other distinguished Atlantic County physicians of the nineteenth century we find: Joseph A. Stout and John J. Jessup, of Somers Point; Lorenzo Fisler, John Budd, Julius S. Taylor and Charles Gill, of Mays Landing; Richard S. Parker, of Port Republic; Job Somers, of Linwood; and Lewis Reed, the first physician to become a resident of Atlantic City. It is related of Dr. Reed that he left his home in Millville, in 1857, to go to Weymouth, Atlantic County, lost his way and found himself at Egg Harbor station just before arrival of the train for Atlantic City. "The thought occurred to him that he would give his tired horse a rest and run down to Atlantic City for a day. He had never visited the new resort, and had no intention of locating here. He happened to arrive the day after an accident at the Methodist Church, then being built, when a carpenter named Conover fell from a scaffold and was killed. The thought in everybody's mind then was that Atlantic City ought to have a resident physician, and as Dr. Reed stepped from the cars he was recognized by a friend, who said: 'You are the very man we need here'. The doctor was introduced to Lemuel Eldridge, at that time the factotum of Atlantic City. Mr. Eldridge agreed with Dr. Reed's friend, and both insisted that the physician should quit Millville and come to Atlantic City. Two weeks afterward he opened his office on Atlantic Avenue, and a year later was elected mayor, serving 5 terms of one year each. He was also appointed postmaster by President Lincoln in 1861, and served until 1872. Dr. Reed died in 1898, aged 92 years."

Though Mays Landing remains the county seat, the rapid progress of Atlantic City has made it the largest town within the county and the center of chief interest. The principal county institutions are located in this vicinity; noteworthy among these being the Pine Rest Sanatorium, for the care of tuberculosis patients, and the Hospital for Mental Diseases, at Smith's Landing. The former has an ideal location, on the edge of a small pine forest and within half a mile of the ocean; the latter is in a quiet, peaceful country atmosphere, and yet quite accessible for friends of its guests.

Chief among medical institutions of the county is the Atlantic City Hospital, which was organized in 1897, had its formal opening November 30, 1898, when it had a capacity of only 10 beds, and has grown to its present proportions of a handsome, thoroughly equipped, modern hospital building, with a capacity of 225 beds, which will be increased to 400 when the new wing now building is completed. From the professional point of view few, if any, hospitals in the state can

claim to surpass this one in the excellence of service rendered. Not the least important feature of the professional work is the monthly Staff meeting, at which detailed reports of each department must be presented and discussed. Reference to the county society reports appearing regularly in the Journal will disclose the instructive character of these Staff meetings; we know of nothing more valuable to the local profession, of any community, than such conferences, if conducted in the manner habitual here.

That the Atlantic City Municipality is not behind the times in its public medical obligations is well shown in the City's Infectious Disease Hospital and in the praiseworthy work of the City Health Commissioner, Dr. Samuel Salasin. The health problems of a resort like Atlantic City are manifold, various and peculiar, but this capable young official handles them all with remarkable success.

Of special interest among the "semimedical" institutions of the city is the Public Library; interesting to us because of the fact that from the very beginning the Board of Trustees has included a physician, Dr. J. B. Thompson, from 1902 to 1909, and Dr. W. E. Darnall ever since 1903; and further, from the fact that the latter is the founder of and has succeeded in developing within the library a very respectable medical section, embracing a valuable collection of text-books and periodicals.

The Atlantic County Medical Society was organized June 7, 1880, pursuant to a call from a group of hard-working, earnest doctors, who were feeling the need of professional fellowship. Those who attended the organization meeting were: Job Somers, of Linwood; E. H. Madden and F. B. Waters, Absecon; Daniel B. Ingersoll, Mays Landing; Theophilus Boysen, Egg Harbor; G. E. Abbott, Ocean City; W. Boardman Reed and Willard Wright, Atlantic City. The officers elected at that meeting were: President, Job B. Somers; Secretary, Theophilus Boysen; Treasurer, E. H. Madden. The purpose of the organization was strongly set forth in a Constitution and a series of By-Laws which, in the main, continue as the guiding influence of the society at the present time.

The growth of the society continued until practically every eligible physician in the county is included in its membership, and the scientific work of the society is of an unusually high order. The influence of the society has been exemplified many times in its effect upon public opinion, in securing legislation for betterment of sanitary conditions and in effecting the enforcement of laws enacted to safeguard the public health.



## MEDICAL SOCIETY OF NEW JERSEY

The 160th Annual Meeting, Haddon Hall, Atlantic City, June 17, 18, and 19, 1926.

### PROGRAM OF MEETING.

#### ANNOUNCEMENTS.

##### Credentials and Certificates.

The Committee on Credentials will meet at Haddon Hall on Wednesday afternoon, June 16, and on Thursday morning, June 17. Its office will be open at appointed times during the meeting.

The Constitution requires that all Fellows, Officers, Annual and Permanent Delegates, and Reporters shall register with this committee.

Permanent Delegates failing to register will be marked as absent by the Recording Secretary. Annual Delegates must present to this committee a certificate of election signed by the President and Secretary of their component societies. Without such certificate they cannot sit as members of the House of Delegates.

Every Permanent Delegate must present a certificate bearing the seal of the Society and signed by the Recording Secretary, and without such certificate he cannot register nor vote in the House of Delegates. Nominees for Permanent Delegates cannot register as Permanent Delegates until after their election by the State Society, when they will receive certificates from the Secretary so that they can obtain their appropriate badges.

Certificates of nominees for Permanent Delegates must follow the special form given in the Constitution on page 12. They should be sent to the Recording Secretary at least one week before the meeting, so that the names may be presented to the Society for election.

Each member of the Nominating Committee should present his certificate to the Recording Secretary before the opening of the afternoon session so that the names of the Nominating Committee may be announced as indicated on the program. The Nominating Committee will meet on Thursday, June 17, at 5:30 p. m. in the committee room.

##### Papers and Reports.

All papers read before the Society or appearing by title on the program, whether read or not, thereby become the property of the Society. The author of each paper is required to give the Recording Secretary a legible copy of the same BEFORE reading. The expense of alterations in a paper after it is in type, and the cost of illustrations, is borne by the author. All manuscripts should be typewritten, double spaced, and on one side of the paper only.

Excepting orations and the addresses of the President, the time to be occupied in the actual reading of a paper is limited **absolutely to 20 minutes**. Those opening the discussion are allowed 10 minutes each, others 5 minutes each.

Members desiring to present voluntary papers or reports of cases should first have their papers accepted by the Committee on Scientific Work and then apply to the Committee on Program for a position.

Papers and reports not presented when called for by the President cannot be presented at a later time unless the regular order of business is completed.

All members of component societies who are in good standing are entitled to sit as associate members and have the privilege of discussing papers in the general session, but have no vote nor the right to take part in the discussions of the House of Delegates.

On arising to discuss a paper, the speaker will please walk forward to platform and announce his name and address clearly for the benefit of the Society. No member may speak a second time in any discussion.

All sessions will be opened promptly at the hour set, in order that the program may be carried out as planned.

The Board of Trustees will meet at Haddon Hall, Wednesday, June 16, 8 p. m.

Committees or Boards desiring meeting rooms will please notify the Committee on Arrangements, M. W. Reddan, Chairman, or W. D. Olmstead, Secretary.

The rates at Haddon Hall, on the American plan, are:

Rooms with running water—

1 person, \$6.00 to \$8.00 per day.

2 persons, \$12.00 to \$14.00 per day.

Rooms with bath—

1 person, \$10.00 per day.

2 persons \$14.00 to \$20.00 per day.

##### Exhibits.

Exhibits of instruments, books, pharmaceutical preparations, x-ray apparatus, etc., will be shown in a special room of the hotel and members are urged to avail themselves of this opportunity to examine the very latest improvements in these various departments.

The degree of interest shown by the visitors in these exhibits mathematically increases or decreases the revenue to the Society. It's up to you to help

#### Thursday, June 17, 1926, 9 A. M. Meeting of House of Delegates

##### Thursday, June 17, 2 P. M.

Newer Therapy of Cardiovascular Renal Disease,  
Hyman I. Goldstein, Camden, N. J.

Abstract.—Consideration of hypertension, ascites, acute heart failure. Value of ammonium chlorid, potassium chlorid, calcium chlorid novasurol (merbaphen), hepatic extract (hepatin), homocamfin (cyclosal), tetranitrate erythrol, luminal (phenobarbital), theocin (theophyllin) alpha-lobelol and certain newer operative procedures briefly discussed.

Therapeutic Problems of Renal Vascular Disease  
and Their Rational Solution,

Theodor Teimer, Newark, N. J.

Abstract.—Faulty practices in treating renal disease. Treatment of co-existing pathologic conditions. The main problem: Adaptation of disordered metabolism on the principle of sparing the diseased organ. Protein ration. The choice of protein. Total caloric intake. Balancing the diet. Acidosis. Salt restriction. Posture, rest and exercise. Safeguarding cardiac efficiency. Reducing blood pressure. Summary and practical points. What may be accomplished.

The Heart in Cardiovascular Renal Disease,

Charles E. Teeter, Newark, N. J.

Abstract.—Well-being of the individual determined more by the integrity of the musculature of the heart than by height of the blood pressure curve. Pathologic changes in the structure of the heart in hypertensive cases. Types of cardiac breakdown. Early signs of failure of function of the heart. Late signs of failure of function. Remedial measures to safeguard the circulation. Conclusions.

Renal Vascular Disease; Nature and Treatment,

Frederick M. Allen, Morristown, N. J.

Abstract.—Classification of types of renal vas-

cular disease chiefly on a morphologic basis. General conception of toxic as opposed to mechanical group from standpoint of therapy. Methods of treatment, chiefly by diet. Conception of these disorders as caused or aggravated only by definite agencies, in opposition to the traditional conception of spontaneously progressive disease.

Discussion on symposium, opened by F. R. Sandt, Paterson, N. J.

#### Thursday, June 17, 8 P. M.

Presidential Address,

Lucius F. Donohoe, Bayonne, N. J.

A Study of Turtle's Heart by Analysis with Slow Motion Camera; the Effect of Vessel Changes in the Heart Muscle as a Potent Factor in Cardiac Degeneration and Incompetence. Illustrated with moving pictures and lantern slides.

Orrin Sage Wightman, New York.

#### Thursday, June 17, 9 P. M.

Smoker and Ladies' Entertainment.

#### Friday, June 18, 9 A. M.

The Essentials for a Successful Prostatectomy,

A. Haines Lippincott, Camden N. J.

Abstract.—The relief of retention; preoperative preparation; the value of blood chemistry and renal tests as a guide for operation; the waiting period; postoperative management.

Recent Progress in Urology of General Interest to the General Practitioner,

Hugh H. Young, Baltimore, Md.

Abstract.—The various advances in urology. The clinical and laboratory studies used in the preparation of a patient for prostatic and kidney operations, and the determination of when the patient can be safely operated on. Recent changes in operative technic in perineal operations for benign prostatic hypertrophy, carcinoma of the prostate and median prostatic bars. The differential diagnosis in these conditions. The symptomatology and pathology of urethral valves and other congenital conditions. Postoperative methods and ultimate results. The problem of urinary infections. Studies of various germicides and the results of their use in local treatment in the urinary tract. Studies made with intravenous germicides. Value of intravenous germicides in both local and general infections. Citation of cases of various types in which mercurochrome and gentian violet have been employed successfully. The problem of antiseptic treatment of infectious diseases.

The Treatment of Bladder Tumors with Metal Seeds Containing Radium Emanation,

Edward L. Keyes, New York.

Abstract.—Glass seeds of radium emanation, such as have been previously employed, permit grave sloughing. Metal seeds permit larger and more efficient dosage of radium emanation, permit neat surgery, eliminate the need for bladder resection, occasion relatively slight postoperative toxemia and little sloughing, and permit the primary suture of the bladder no matter how large, the tumor attacked. Technic. Choice of cystoscopic or suprapubic method of approach. Control of results by radiography. Case histories.

Urographic Studies of Various Types of Congenital Renal and Ureteral Conditions,

S. R. Woodruff, Jersey City, N. J.

Abstract.—Incidents of congenital lesions and

anomalies of the kidney and ureter. An explanation of the causes. Congenital lesions of the kidney and ureter are usually only diagnosed by urography. Cystoscopy with ureteral catheterization not sufficient. History and physical examination of very little value. Simulation of abdominal and pelvic visceral diseases so close that frequent erroneous judgments are made, and unnecessary operations performed. Clinical signs of these conditions often not great unless infection or calculus formation take place. More frequent in female, and symptoms often ascribed to neurasthenia. In double kidney, lower pelvis usually contains the most pathology. Frequently no symptoms in female until pregnancy, when pyelitis is very liable to intervene. Bilateral anomalies rare. Vague abdominal pains with severe intermittent crises should be studied by urography. X-rays alone will not detect. Intermittent or continued pyuria, particularly when symptomless, often due to congenital deviations from the normal in structure. Lantern slide illustrations of various types.

Epithelioma of the Penis,

Charles H. De T. Shivers, Atlantic City, N. J.

Abstract.—Study of 5 cases of squamous cell epithelioma of the penis. Causes ascribed by patients themselves. Predisposing causes given by the examining physician. Symptoms: Subjective, objective. Examination: General, local; general inspection, palpation, removal of tissue for histologic examination. Pathology: Clinical types of carcinoma of the penis; the most frequent site of origin. Differential diagnosis from syphilis, granuloma inguinalis, and chancroidal infections. Treatment: X-rays, radium, and amputation with removal of inguinal lymph nodes. Results: Carcinoma of the penis in which inguinal nodes were not involved; carcinoma of the penis in which inguinal nodes were involved. Individual case reports. Lantern slides.

#### Friday, June 18, 2 P. M.

Election of Officers. No other business.

#### Friday, June 18, 2:30 P. M.

Roentgenologic Diagnosis of Gall-Bladder Disease.

Illustrated by lantern slides.

J. Roemer, Paterson, N. J.

Abstract.—There are 3 methods by means of which gall-bladder pathology may be roentgenologically diagnosed. They are: Direct method, indirect method and cholecystography. The direct method consists in roentgenologic visualization of gall-stones and the gall-bladder. The phenomena observed in the course of an examination of the gastro-intestinal tract, by means of an opaque meal. Cholecystography is the study of gall-bladder pathology by means of an opaque dye which is administered intravenously or orally.

Discussion, Ernest May and Erwin Reisman, Newark, N. J.

Radiation Therapy in Tuberculosis,

Ernest A. May, Newark, N. J.

Home Treatment of Tuberculosis by Artificial Pneumothorax,

M. James Fine, Newark, N. J.

Gleanings from 40 Years of General Practice,

G. B. Philhower, Nutley, N. J.

#### Friday, June 18, 8:30 P. M.

Ladies' Entertainment.

#### Saturday, June 19, 9 A. M.

House of Delegates.



## TREASURER'S REPORT, 1925.

## CAPITAL ACCOUNT.

DR.	
January 1—	
1 M Chicago & Alton 3½ % Bond	\$786.50
2 M 1st Liberty Loan 3½ % Bond	2000.00
10 M 4th Liberty Loan 4¼ % Bond	9935.00
2 M Certificates of Deposit.....	2000.00
December 1—	
Profit on Sale of 5 M 4th Liberty	
Loan Bonds .....	136.57
	<hr/>
	\$14,858.07

CR.	
December 31—	
1 M Chicago & Alton 3½ % Bond.	786.50
5 M 1st Liberty Loan 3½ % Bond.	2000.00
5 M 4th Liberty Loan 4¼ % Bond.	4975.63
Cash to current accounts .....	7095.94
	<hr/>
	\$14,858.07

## CURRENT ACCOUNT

1925	
Balance, January 1st .....	840.67
Assessments—	
Atlantic .....	\$430.00
Bergen .....	505.00
Burlington .....	510.00
Camden .....	580.00
Cape May .....	110.00
Cumberland .....	215.00
Essex .....	3100.00
Gloucester .....	15.00
Hudson .....	1770.00
Hunterdon .....	130.00
Mercer .....	630.00
Middlesex .....	435.00
Monmouth .....	355.00
Morris .....	360.00
Ocean .....	90.00
Passaic .....	865.00
Salem .....	95.00
Somerset .....	195.00
Sussex .....	90.00
Union .....	830.00
Warren .....	180.00
	<hr/>
Interest .....	\$11,490.00
From Committee on Arrangements....	131.71
From Committee on Publication.....	4995.21
From Capital Account .....	7095.94
Error in Deposit Slip .....	1.00
Sale of Health Examination Material.	4.95
	<hr/>
	\$25,181.69

## PAYMENTS

1925	
For Committee on Credentials.....	90.50
" " " Publication .....	9465.52
" " " Welfare .....	2501.90
" " " By-Laws .....	2.00
" Health Examination Material....	122.50
" Board of Trustees.....	60.00
" Printing & Stationery .....	661.41
" Legal Services .....	2018.53
" Annuity .....	500.00
" Executive Secretary's Office.....	7222.28
" Recording Secretary's Office .....	1913.55
" Treasurer's Office .....	84.10
BALANCE, December 31 .....	539.40
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	\$25,181.69

E. J. Marsh, Treasurer.

## TREASURER'S REPORT FOR THE FISCAL YEAR 1926.

(January 1 — May 31)

## CAPITAL ACCOUNT.

DR.	
January 1.	
1 M Chicago & Alton 3½ % bond	\$786.50
2 M 1st Liberty Loan 3½ % bond	2000.00
5 M 4th Liberty Loan 4¼ % bond	4975.63
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	\$7762.13

CR.	
May 31.	
1 M Chicago & Alton 3½ % bond	\$786.50
2 M 1st Liberty Loan 3½ % bond	2000.00
5 M 4th Liberty Loan 4¼ % bond	4975.63
	<hr/>
	\$7762.13

## CURRENT ACCOUNT.

## RECEIPTS.

Balance, January 1. ....	\$539.40
Assessments—	
Atlantic .....	\$1180
Bergen .....	1100
Burlington .....	100
Camden .....	1050
Cape May .....	200
Cumberland .....	460
Essex .....	5390
Gloucester .....	290
Hudson .....	3590
Hunterdon .....	250
Mercer .....	1300
Middlesex .....	895
Monmouth .....	770
Morris .....	700
Ocean .....	160
Passaic .....	1760
Salem .....	180
Somerset .....	350
Sussex .....	170
Union .....	1620
Warren .....	330
	<hr/>
	\$21,845.00
Interest .....	147.08
From Committee on Publication.....	2,432.08
Health Examination Charts sold.....	35.85
	<hr/>
	\$24,999.41

## PAYMENTS.

For Committee on Publication.....	\$3710.65
" " " Welfare .....	358.56
" Board of Trustees.....	7.00
" Executive Secretary: Salary.....	4166.66
" " " Office and	
Travel Account .....	1420.06
Printing & Stationary.....	527.53
Legal Expenses .....	178.22
Delegates to A.M.A.: RR fares.....	218.98
Treasurer's Office .....	7.85
Recording Secretary's Office.....	23.96
Annuity .....	250.00
Balance to 1927.....	14,129.94
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	\$24,999.41

E. J. Marsh, Treasurer.

## Current Events.

### STATE HOSPITAL AT GREYSTONE PARK GRADUATION EXERCISES.

Graduation exercises of the School of Nursing conducted by the State Hospital at Greystone Park were held on the evening of Wednesday, April 14 in the chapel of the Main Building. The formal exercises were followed by a reception and dance in honor of the graduates, in the adjacent amusement hall. The chapel and hall were beautifully decorated with an artistic profusion of palms, ferns, other potted plants and cut flowers from the hospital greenhouses, where many of the patients delight to employ their time in healthful occupation. Prominent in the decorative scheme were the class colors red and white.

Graduated were Miss Elizabeth Krauchuck of Elizabeth and Miss Anna A. Stassat of Newark, New Jersey; Miss Jeanette McDonald of New York City and Miss Beulah Curtis of Belfast, Maine.

The order of exercises were: A serenade by the orchestra; invocation by Rev. Fr. John J. Culliney of St. Virgil's, Morris Plains; introductory remarks by Superintendent Marcus A. Curry, M. D.; address by Hon. William J. Ellis, Commissioner of the State Department of Institutions and Agencies; presentation of diplomas and class pins by Dr. Augustus S. Knight, chairman of the medical and nursing committee of the Board of Managers of the hospital; benediction pronounced by Rev. Henry Harris of the First Presbyterian Church of Morris Plains.

Superintendent Curry, in welcoming Commissioner Ellis, President Daniel S. Voorhees and other members of the Board of Managers, members of the graduating class, guests and friends, expressed the belief that the occasion marked an epoch in the history of the hospital and in the care and treatment of the mentally ill; emphasizing that this is the first graduation of nurses held since the reorganization of the training school. In a brief history of the school, Dr. Curry said that although a training school had been maintained at the institution since 1894 and has done excellent work in a limited field, it did not meet the requirements of the State Board of Examiners of Nurses for an accredited school of nursing until about 4 years ago, when the hospital authorities determined that modern conditions demanded, in justice to the patients and student nurses, that if a course of instruction were to be given it should be of the highest type and lead to a diploma of recognized value; that, accordingly, as Superintendent, he was authorized by the Board of Managers to take the necessary steps for a satisfactory reorganization. To this there were many obstacles, due largely to lack of personnel, because of inadequate housing, and overcrowded conditions; but that the accredited school of nursing finally became a reality and since December 1, 1922, the Greystone Park School of Nursing has been accredited and the graduates recognized by the State Board of Examiners of Nurses and are eligible to apply for registration and become "R. N's." under the regulations of the State of New Jersey.

The training school teaches the standard curriculum and has affiliation with the school of nursing conducted by Bellevue and Allied Hospitals, New York. The course is of 3 years. The first year is spent at the Greystone Park school; the second year at Bellevue and Allied Hospitals; the students then returning to finish at Greystone

Park; so that the patients at the State Hospital receive the benefit of the training and experience the nurses have gained at the affiliated school.

Continuing, Superintendent Curry said that the value of skilled nursing in typhoid fever and pneumonia is now unquestioned; but its importance to those suffering from disorders of the mind is even more vital. Patience, tact, gentleness, understanding and accurate skill, all the attributes that have made the nursing profession so highly honored and respected in every circle of society, are doubly essential to those who spend long hours caring for the mentally ill; and, in addition, in a great institution like the State Hospital at Greystone Park, where thousands of patients and hundreds of employees are grouped together, the student nurse learns the importance of coöperation and coördination in order that all divisions of the hospital may work together efficiently and harmoniously for the greatest good of those whom the institution exists.

Concluding, Superintendent Curry addressed the graduates directly, saying: "We have tried to give you the type of training which will best prepare you to be of service to the sick and suffering; and you have responded with diligent application. Now you are prepared, either to go out and develop new fields for yourselves or, as we sincerely hope you will, remain at this institution and as graduate nurses help to maintain and elevate the standards of nursing on the wards of the Greystone Park Hospital. In either case, I charge you to remember always that the first of all requirements is loyalty to your patients, to your professional standards of duty and ethics, and to the institution; so that no act of yours may ever bring anything but credit to the hospital and to the school in which you have received your training. Others will come after you, a long and good line, we hope; but you are the first, and in this your position has eminence which carries with it a high order of responsibility."

Introducing Commissioner Ellis, Dr. Curry said that he felt it peculiarly fitting that the new commissioner should be present to address the first commencement exercises of the reorganized school; and paying a tribute to the Commissioner's outstanding characteristic, optimism.

Commissioner Ellis, after paying a compliment to the work of Superintendent Curry and his splendid staff and of the work generally throughout the State, made an address of uncommon interest and indicated a ready familiarity with the progress in medicine, nursing and institutional administration; Stating that no realm of human activity has seen progress equal to that of the medical and nursing professions during the last 50 or 75 years; recounting some of the inestimable medical discoveries just preceding and following the Civil War, such as ether, chloroform, the Pasteur discoveries, etc.; that there is going on a great progress and a great advance all along the line in the fields of medicine and hospital administration; that the nursing profession as well as the medical profession feels the stimulation of these great discoveries; that since the first State Hospital Training School for nurses established at McLean Hospital, Mass., in 1879, the advantages of good training in the field of psychiatric nursing has gained wide recognition; that it has been well said that a graduate nurse who has been trained in a hospital for mental and nervous diseases possesses something that no graduate of any other hospital can possibly have, as she has worked with a class



of patients whose care requires tact, patience, sympathy, skill and capacity and also requires all other attributes of the nursing profession; that great as has been the progress in the field of psychiatry and great as it has been in hospital management for the past few years, we all know that the future holds greater possibilities and the nurses are going into this work at a time when there is a great scarcity of trained people in this important branch of nursing; and to the graduates impressing upon them the importance of loyalty to their profession, to their patients and to the organization with which they are identified; that as they are graduated they carry with them the highest appreciation that this institution has to give, the honor of the school, the reputation of the institution; that they are not to feel that it is the school or the institution which makes the record but that they, as individuals, make the record and reputation of this institution; that wherever they go they carry with them the best this institution has to offer; the best wishes, the confidence, the best training by the staff and Superintendent of Nurses, Miss Wheeler, and everyone who has touched their student life; that in their work they will try to reflect credit upon this school of nursing, because there will be others to follow and what they do will influence the future of the hospital and training school at Greystone Park.

Concluding, Commissioner Ellis said that the people of New Jersey have responded to the needs of this institution and the other institutions of the State but they should not have done so if they did not see the fruits of the splendid work of this staff; expressing the hope that this occasion is just an evidence of the beginning of more confidence, of more progress and of greater attainments, not only on the part of the Greystone Park State Hospital but of all the institutions in New Jersey; that the Department of Institutions and Agencies is keenly interested and is enthusiastic for Greystone Park.

Dr. Knight, preliminary to presenting the diplomas and decorating the graduates with the class pin, paid a high tribute to the qualifications of Superintendent of Nurses, Miss Catherine F. Wheeler, R. N., and as each graduate stepped forward to receive her earned honors she was cordially received with encouraging words of congratulations. Each graduate carried a beautiful bouquet presented by the institution; and Superintendent of Nurses received a gorgeous floral tribute from the graduating class. The class pin which was greatly admired was designed by Miss Wheeler.

After the formal reception of the graduates dancing and refreshments were enjoyed.

#### NEW JERSEY MEDICAL WOMAN'S ASSOCIATION.

The Annual meeting of this association will be held at the Seaside Hotel, Pennsylvania avenue and the Board Walk, Friday, June 18, 1926, the opening session to be at noon.

The officers of the association are: President, Dr. Grace A. Holmes, of Elizabeth; Vice-President, Dr. Lillia Ridout, of Elizabeth; Secretary, Dr. Grace M. Robertson, of 821 Second Place, Plainfield, N. J.

#### SUMMARIZED REPORT OF SECOND TRI-STATE CONFERENCE. HELD AT NEW YORK, FEBRUARY 26, 1926.

The second meeting of officials from New York, Pennsylvania and New Jersey State Med-

ical Societies was held at the New York Academy of Medicine on the afternoon of Friday, February 26, 1926, Dr. N. B. Van Etten presiding, and Dr. Alec Thomson acting as Secretary.

The three State Societies were represented by the following officers in attendance:

New York: N. B. Van Etten, President Medical Society of the State of New York; D. S. Dougherty, Secretary Medical Society of New York; Orrin S. Wightman, Editor-in-Chief New York State Journal of Medicine; Frank Overton, Executive Editor New York State Journal of Medicine; Joseph S. Lawrence, Executive Officer New York State Medical Society; Charles A. Gordon, Chairman Committee on Public Health and Medical Education Medical Society of New York; W. H. Ross, First Vice-President Medical Society of New York; and, Alec Thomson, Executive Secretary Kings County Medical Society.

Pennsylvania: Ira G. Shoemaker, President Pennsylvania Medical Society; Arthur C. Morgan, Chairman Legislative Committee Pennsylvania Medical Society; Frank C. Hammond, Editor Atlantic Medical Journal.

New Jersey: Lucius F. Donohue, President New Jersey State Medical Society; J. Bennett Morrison, Secretary New Jersey State Medical Society; Henry O. Reik, Executive Secretary and Editor New Jersey State Medical Journal.

In opening the meeting, President Van Etten referred to the first conference held in Atlantic City, November 7, 1925, and to the good results that promised to come from these gatherings. It has been found that these states have a good many common interests to discuss and a great similarity in the problems each must deal with, so that uniformity of procedure is a thing very much to be desired. Among these problems, he mentioned the desirability of uniform laws governing the licensing of physicians, a subject especially important to those practicing on the border lines of these states; the classification of nurses and regulation of their relationship to the profession; the institution of similar workmen's compensation laws; graduate extension medical work within the profession, to aid the practitioner who is unable to keep in close touch with the larger medical institutions; and, the promotion of health education for the benefit of the public.

#### Graduate Medical Education.

Dr. Gordon, upon request of the President, explained the plan recently inaugurated in New York for promotion of postgraduate medical study. Through coöperation of his committee from the State Medical Society, with the State Board of Health and State Board of Education, it has been found possible to place at the command of any county medical society, and without cost to the latter, courses of instruction in practical medical subjects. Lecturers have been secured who are willing, upon request from the county society, to visit that county one day a week for a period of six successive weeks and to conduct a definite course of instruction; the teacher presents a short lecture and this is followed by questions from the audience and by a general discussion, much after the manner of clinical class teaching in the last year of medical school work. The plan has been tried successfully in the teaching of obstetrics and of pediatrics but it can be employed for any other branch or for any specifically limited medical or surgical topic; a varying number of lecture days being required according to the length or importance of the subject chosen. The expense of such work, consisting of a small honorarium

to the teacher and his traveling expenses, is borne by the State Society and Board of Health which have united in procuring a special fund for this purpose; the attending class from the county society is not charged for the instruction. The county society must take the initiative however, in asking for any of these courses and must take care of all local arrangements as to time and place of meeting and distributing information to members of the society and of the class.

This plan is susceptible of variation according to the needs of any particular community. For instance, where there is a medical school, as in Syracuse, more elaborate courses, with clinical demonstrations and exhibition of patients, may be provided, or, in other districts, where a definite course is not wanted, it is possible to arrange for a single lecture on such topics as cardiac disease or tuberculosis, with demonstrations by black board or lantern; instead of the medical school, a county hospital may be used as the teaching center. The medical colleges, usually having their own postgraduate courses, have not given much support to this plan but lecturers can readily be obtained through the State Health Department or independently from among prominent members of the profession.

Dr. Morgan explained the plan employed by the Pennsylvania State Society through coöperation with the University of Pennsylvania Graduate School of Medicine. Definite courses are devised by the University authorities and members of the faculty go to various parts of the state to conduct this mode of instruction. Such courses have been taken to cities like Scranton and Sayre, and continued over a period of 28 weeks; the details as to local arrangements being left to the county medical society whose secretary keeps in close touch with the Dean of the school. In both the cities mentioned a well organized local hospital was used as the medical center of activity. The speaker advised that care be taken not to permit such courses of instruction to interfere with the regular meetings and work of the county society; they should be a thing apart and distinctive from the routine society work.

Dr. Thomson called attention to the pronounced success of the weekly courses carried on by the Kings County Medical Society, where instructive lectures and demonstrations are conducted every Friday afternoon for one hour at the Brooklyn home of the organization. These courses have been attended by a large percentage of the members and have aroused immense enthusiasm.

Drs. Donohoe and Morrison described the efforts made in New Jersey, which has no medical colleges to serve as graduate teaching centers, to carry on graduate instruction, referring especially to the adoption by the State Society of the plan devised by the University of Pennsylvania; the University having offered to extend its work over the boundary line, to accept New Jersey physicians into courses given at the medical school, and to carry the advertised courses to the various counties in New Jersey on the same basis as they are taken to the counties of Pennsylvania. The plan was accepted by the State Society at its last annual meeting but in the short time that has elapsed since that meeting there has been as yet no response from the counties.

Dr. Reik expressed interest in the plan described by Dr. Gordon and asked for further information as to the procurement of funds for carrying on this work. He thought the difficulty

in the way of extending the Pennsylvania plan lay in the cost imposed upon the small county societies; these organizations are not, or do not consider themselves, able to defray such expense. If courses of instruction can be offered to the county men at points near their homes and without any material cost, such a plan will be much more popular and much more likely to succeed than will any plan that calls for an assessment or contribution. At first sight, it looks as if Dr. Gordon's plan might be profitably substituted in New Jersey for the plan previously considered and if that should prove to be true the New Jersey men may well feel that in this one point of information gained they will have been repaid for attending this conference.

Dr. Wightman emphasized the importance of having the county society become the nucleus of professional educational movements. An active society President and a competent Secretary are necessary to success and he thought it might be well to bring the county secretaries together to talk over the details of this problem, because there are a lot of secretaries who are not enthusiastic workers until stimulated into action; where you find a live secretary you will probably find lecture courses being arranged.

Dr. Van Etten said that observation as President of the New York State Society had taught him that the county society is just as good as its secretary and not a bit better. It is essential to use the machinery we possess, and that means to secure good society secretaries and get them actively coöperating in this work.

#### Abolition of Diphtheria.

Dr. Lawrence explained that the state-wide antidiphtheria campaign in New York had grown out of the satisfactory use of toxin-antitoxin in some of the city health departments and because of the rather remarkable experiences reported as to control of the disease in certain localities. Auburn with a population of 37,000, had recorded no death from diphtheria in a period of 2 years, and the last death reported prior to that was the result of neglect. During the past year an attempt has been made to study the situation throughout the state—the State Medical Society coöperating with the State Department of Health, the Charities Aid Association, and the Metropolitan Life Insurance Company—and a working program has been evolved. This program comprises both publicity and educational work and is going to be confined at first to the larger cities. It is intended to start by immunizing children under 10 years of age in the schools, by securing the aid of the family physicians, the school physicians, and the public clinics. As that program is advanced, the work will be directed to the pre-school child, especially to children between 6 months of age and the time for admission to the school; the idea being to eventually induce all parents to have their children immunized during the first year of life. This campaign was started by the Committee of Health publishing articles in the medical and health journals. After explaining the plan to physicians it is laid before the public health and school nurses and is then carried to the laity; the Metropolitan Life Insurance Company has prepared pamphlets for public distribution and a one reel film showing the effect of diphtheria on the health of the country from the period of the Civil War to the present time. The President of the State Society is sending letters to the Secretaries of all the county societies asking coöperation, and the



State Department of Education is doing all it can to further this work.

Dr. Gordon spoke of the necessity for securing the active coöperation of all practicing physicians in developing a program of this sort. It is necessary to have a full-time officer connected with the state medical society to visit all the county societies and outline the need for stamping out diphtheria and explain the methods by which this can be done, and to discuss the program thoroughly with them, considering particularly local problems, in order to get the campaign definitely sponsored by the medical profession. The public can be called upon then to accept the opportunity for immunization at a given time when the profession is prepared to act practically as a unit in the administration of toxin-antitoxin to everyone who will apply for it. It should be given by the physicians and the people should pay for it whenever they can afford to do so. But, in order to reach every susceptible child, the authorities must be prepared to offer free toxin-antitoxin to every child, on definite days and in a definite manner, the administration to be by physicians selected by the county society and who shall be compensated for their work.

Dr. Thomson described the introduction of this work into Erie county, N. Y., where the county society thoroughly discussed every aspect of this problem before starting the campaign. The city and state health officers, being paid for their services, are servants of the community and should aid the members of the medical profession in carrying out such a program. The state medical society will not be able to cover the entire state at one survey but will have to secure the coöperation of each district separately, and may have to proceed slowly in order to accomplish satisfactory results.

Dr. Shoemaker expressed the opinion that the physician should always be approached first in consideration of these health problems; that too often, has not been done. Lay organizations have sometimes started to carry on health work and then attempted to supercede the physician. In Pennsylvania the State Health Department and State Educational Department have been considering the use of toxin-antitoxin in the schools. In so far as possible, every child has been immunized by the school physicians; in some instances with the assistance of the Visiting Nurses Association. Toxin-antitoxin has been freely distributed by the Department, of Health to all who need it. There has been some indifference on the part of physicians because of the over-activity of some lay organizations that spread propaganda which the physicians could not approve. Preventive medicine should be under the control of the medical profession if we are to secure the best results.

Dr. Donohoe discussed the lack of public interest in these preventive measures and the necessity for public educational work to make the people appreciate what the state and the profession are doing for them.

Dr. Morrison related the activities of the New Jersey Board of Health in relation to this question and stated that the Board is considering the advisability of asking the Legislature to enact a law for compulsory immunization by toxin-antitoxin; he thought it doubtful, however, whether such a law can be passed until the public is informed as to the benefits to be derived from it.

Dr. Reik made a brief report of his efforts at public education in medical matters, through the broadcasting of medical talks by radio and the

simultaneous presentation of mimeographed copies of these speeches to the state press for coincident publication. It is hoped to extend these talks to include preventive medicine.

Dr. Dougherty remarked upon the importance of having the state medical society and the state Board of Health work together in development of these campaigns.

Dr. Thomson suggested that Dr. Gordon's plan for post-graduate instruction might be extended to cover in the field of preventive medicine. The work can be covered more rapidly by the medical profession than by unofficial agencies working independently or working as leaders of the medical profession. Through an official study program we might secure coöperation more quickly.

Drs. Wightman and Overton spoke of the support the state medical journals could give to this work; through publishing details of the campaign, keeping every member of the profession informed, explaining the possibilities of securing toxin-antitoxin for charity use and the most effective methods of administering it.

#### Periodic Health Examinations.

Dr. Wightman opened the discussion of this subject and explained what New York is doing to keep this a medical and prevent its becoming a commercial proposition. It must be fostered by the county societies and they can probably best be interested in the project by demonstrations of proper examinations and the making of proper records.

Dr. Reik stated that the New Jersey State Society had, at its last annual meeting, adopted the history and record blanks previously prepared by the New York County Medical Society and that he had been presenting the subject to county societies and to lay organizations all over the state. He spoke of the desirability of securing a suitable moving picture film to demonstrate the complete physical examination, and suggested that the 3 states combine to meet the expense of having such a film made.

Drs. Thomson and Wightman then referred to some work being done under the auspices of the New York Tuberculosis Association, which is engaged in making such a film and stated that it is possible this film will be ready for inspection at an early day. It will be a reel of 1000 feet length, and it is possible that each of the state societies may secure a copy for use in their respective districts.

Dr. Hammond thought it important to continue keeping this matter before the profession by articles and notes in the state society journals. This was agreed upon at the last conference and we are all trying to push the matter; every issue of the Journal should have something to say about this topic.

Dr. Morgan called attention to the accomplishment of the Pennsylvania society in educating its members with regard to periodic health examinations. At the annual meeting in 1924 a list of physicians was selected, numbering 28 and representing all the teaching institutions in the state, and placed under the direction of one man who should arrange to make examinations of as many as possible of the physicians themselves. These examinations served to fix the importance of the project in their minds and also served as a means of instruction for the conduct of such examinations. The Philadelphia County Society has since set apart one room in their building for conducting physical examinations of its members, and this growing group of trained examiners will expand the work by examining visit-

ing physicians during the period of the sesqui-centennial. The State Society is also sending its examiners to the various county medical societies, because it has been found valuable, first, for the physicians to be better trained in the technic of examination, and secondly, to become responsible for spread of the example.

#### Group Insurance and Legal Defense.

Dr. Morrison opened the discussion of this topic with an explanation of the form of group insurance now being offered to the New Jersey State Medical Society. He explained the gradual evolution of this group policy up to the point where it now appears to be an ideal form of insurance against malpractice suits.

Drs. Dougherty, Van Etten and Ross discussed this plan and all agreed that the policy described by Dr. Morrison was the best yet devised and put into effect.

Dr. Shoemaker explained that Pennsylvania had not accepted the group plan but had preferred to adhere to the scheme of a medical defense fund, protecting the physician with adequate counsel and support of his confrères, but not assuming any financial obligation as to payment of awarded damages.

Dr. Ross presented a careful analysis of the situation in each of these three states and, at the conclusion of the discussion, Dr. Dougherty offered a resolution to the effect that the conference endorses the general principle of having state medical societies afford defense to members against whom malpractice suits may be brought. This resolution was unanimously adopted. The Pennsylvania delegates were unwilling to specifically endorse the group insurance feature of such protection as yet, preferring to wait for further demonstration of its value.

#### Workmen's Compensation.

This subject was called up as the next feature of the program but Dr. Reik suggested that, as the hour was late and the subject one of too much importance to be dealt with in a few minutes, it might be well to carry this topic over until the next conference, and moved that another conference be held in the near future.

Dr. Morgan seconded the motion, after presenting an amendment extending an invitation to hold the next conference in Pennsylvania. The amended motion was adopted and the invitation of Pennsylvania accepted.

The conference then adjourned.

## Communications.

### THE TRAINED PATIENT.

(Letter from a recent inmate of the surgical ward)

The evolution of human understanding and learning was slow. During the early centuries of the race the chief occupation other than the struggle for sustenance was fighting. This of course was inevitable. Although the apple dropped easily into Eve's hand yet soon after this if one had apples one must know how to protect his store from depredation of others who also liked apples and in those early ages, little politeness or courtesy was shown when one's apple tree or clothes line was raided. Early men not only developed muscle but quickly learned how to use it. If one in those times was so foolish as to love his neighbor as himself his neighbor soon not only got the drop on his orchard but usually his

wife became part of the swag. It came about naturally, therefore, that man soon taught himself to fight—to fight for his grub, to fight for his booze, to fight for his near relations, which of course included his muscular partner, and her kids, for if he didn't fight he soon lost his nice warm place in the sun. The training of his sons and his in-laws naturally followed. If they backed him up in a scrap his welfare federation was accomplished. As ages advanced this training grew more evolutionized, more perfected. One next heard of bands of trained men, trained to fight, and these in time were called soldiers and in the process of natural law armies of trained men were the chief bulwark of "Cabbages and Kings."

Years, yes, centuries rolled on. Fighting brought wounds and death. The battle wounds in the early centuries of the fighting man, civilized and uncivilized, must have been shocking beyond our power to conceive. It was a common thing to pour boiling oil into the most grievous bodily injuries. The stopping of hemorrhage by searing the deepest and most sensitive bleeding parts with red hot irons was a pastime in comparison to certain other surgical procedures quite fashionable in those days. It took the nineteenth century to give the world the blessings of anesthesia. Think of it, men witnessed their own legs and arms and other appendages being cut off with clumsy tools while a half dozen strong-arm men held them down until the ordeal was over.

Now, strange coincidence. It was about the same time in the same decade of the same century that gave to suffering humanity the divine nirvana of anesthesia (almost 20 centuries after Christ) that gave a tortured world another great blessing—the Trained Nurse. It is hard now to believe that they did not grow on trees or always exist. How was it possible for man to wait until the middle of the nineteenth century for this gift of God? But it was not until Florence Nightengale, in the late eighteen-fifties, laid her gentle finger on the tortured eyes of pain that the trained nurse was born. Even then, like in the day of Christ, the world "knew her not". She just escaped being strangled—not by the hangman—but by the red tape of official intolerance to progress. She escaped but her life hung in the balance and more than her life as she herself proclaimed—her work—her God-given inspiration—the task she had set herself to do—to relieve if not save a suffering world.

Think of it! It took the world nineteen centuries after Christ to find the trained nurse. But the trained nurse came quickly into her own—she is at this date more than holding her own—and she has become an institution of civilization, a living, indispensable power for the good of the race.

Before the advent of the trained nurse the word "trained" chiefly applied to animals. We had trained dogs, trained monkeys, trained seals and even trained fleas. But evolution moves; otherwise it would give the lie to even the little word "evolve". The next and almost unbelievable thing to become trained after the nurse, was the patient. It has been of no use for him to struggle. Often he never knows the process is going on. Now there is a great difference in the case of the trained patient and the trained nurse. The latter gets good hard cash even during the process of her training. The former not only pays much cash (for there is no bargain counter) but during, even all through, the kindergarten stage of his schooling he pays big money; but it is part of his training to part graciously with his



wealth and if he asks for things or makes remarks he must "say it with a smile". He soon learns that the voice with the smile goes farthest and brings the most. Remember the evolution of the trained patient was a slow process. The trained nurse was born in the nineteenth century. It took almost 20 centuries to produce the trained patient. His training is still going on. It is only fair to state that the doctor as well as the nurse is responsible for the trained patient. There was a time when there were trained doctors. That genus has been overshadowed by the trained patient; there are so many more of him. Let no one dream that it is left to the patient to make a decision. This matter is part of his training. The doctor or the nurse make the decisions. His opinion is asked more out of courtesy—that of his family is politely listened to and passed by; they too become trained. But the patient's training is so perfected that while all decisions are made for him he is always made to believe that he is "it" and this clairvoyance is extended until it embraces the whole family. The perfectly trained patient is educated to such perfection that he is willing to eat out of the nurses hand in every sense of the word. The doctor is no good if he does not see to this.

It is idle to remember that all this takes time. But the training of the patient is much more intensive than that of the nurse. It takes 3 years to train a nurse but many a patient has been trained in less than 3 weeks. Do not for a moment believe the process is a painless one or that the patient bows his neck under the yoke without a struggle. But the contest is an unequal one. He is weak. He, you must remember, is laid low, often upon a bed of pain. There is nothing like pain to subdue the masculine spirit. Which, plus an attractive nurse, a forceful doctor, and then plus a few of the unmentionable intimate paraphernalia of the sick chamber, soon crushes his sturdy assertive spirit and he readily submits to things which in his hours of pride and his strength and health would be most horrifying to his spirit.

When his doctor tells him he is crazy to be operated on in his nice comfortable home where he can have, day and night, all the craved sympathy and tears of his family about him, with his favorite dog and his favorite bootlegger to give him consolation, he meekly submits to go to a strange cheerless hospital where he exchanges a bed-chamber, parlor and bath for a 10x8 cubicle, with cold white sterilized bedsteads, bed clothing, mission furniture and bare, painted walls. Even his most favorite food is emasculated after it undergoes its requisite sterilization. When his hour strikes and the doomsday of his operation approaches, his training is so perfected that he is prepared for the Ku Klux costumes of all the surgeons and nurses. His spirit is now so broken that he readily signs without a protest that paper of doom that renounces all claim for his inherent right to claim indemnity if by any chance a cog is slipped in the operating room and if the surgeon should pleasantly leave a towel, a glove, a pair of scissors or even his hat in this privately owned abdominal cavity. He is trained to believe that the hospital, like the King, can do no wrong. Even if he has been a woman-hater and has abjured the sex that wears, with so much grace, the skirt, that very skirt now has a proprietary right to all his most intimate parts and functions. All because of his weakened powers of resistance and because he is adroitly brought to believe that not only cleanliness and

asepticism is first and is better than godliness, but because he is taught that sure and swift nemesis will follow any lack of obedience and that there is somewhere a nice cold marble slab in a cold air-tight room where the patient of unsuccessful operation (which of course render the victim forever beyond even the stage that kicks) eventually lands and where such casualties find their natural and lasting termination. It is reserved for the perfectly trained patient to learn that only by his own personal behavior can by any possibility a cure be consummated, so his intellectual faculties, if any remain, cooperate with all these forces more intellectual and trained than his.

Therefore, it has remained for the twentieth century to produce the Trained Patient. His training is only complete when he leaves the hospital absolutely convinced that he has been snatched from the jaws of death. Furthermore, his training now is so complete that he honestly believes his surgeon is second only to Jesus Christ, that all his nurses not only have angel wings hidden beneath their comely shoulders, and that the hospital, where he expiated all his early earthly sins, is the greatest institution on this earth and that it rightly deserves, for all the rest of his mundane existence, an annual subscription second only to the price of his seat on the Stock Exchange.

A final word. It is far from the intention of the writer to make a joke of the great tragedy of sickness and pain. He has had too much of this himself to make this grave mistake, and his own experience has chastened his spirit and has led him through a vale of tears to the firm belief in the benefits of hospital treatment and also, to the ultimate degree, to knowledge of the necessity of being himself a Trained Patient.

LETTER FROM THE BOARD OF MEDICAL EXAMINERS ANNOUNCING RECENT PROSECUTIONS.

January 25, 1926, Charles H. Witter, an unlicensed chiropractor of Dunellen, N. J., pleaded guilty to a charge of practicing medicine without a license, in the New Brunswick District Court, and paid the penalty and costs.

January 25, 1926, Albert J. Smith, a druggist of Bradley Beach, N. J., pleaded guilty to a charge of practicing medicine without a license, in the Asbury Park District Court, and paid the penalty.

January 27, 1926, J. Harry Hayes, a druggist of Asbury Park, N. J., pleaded guilty to a charge of practicing medicine without a license, in the Asbury Park District Court, and paid the penalty.

February 2, 1926, Raymond O. Danese, an unlicensed chiropractor of Hudson Heights, N. J., pleaded guilty to practicing medicine without a license, in the East Rutherford District Court, and refused to pay the penalty. He was committed to jail for 20 days.

February 2, 1926, Floyd Farrell, an unlicensed chiropractor of Hackensack, N. J., pleaded guilty to a charge of practicing medicine without a license, in the East Rutherford District Court, and paid the penalty.

February 9, 1926, Regina B. Heim, an unlicensed chiropractor of Newark, N. J., pleaded guilty to a charge of practicing medicine without a license and paid the penalty.

February 23, 1926, Gyril H. Guterl, an unli-

censed chiropractor of Jersey City, N. J., was tried in the Jersey City District Court on a charge of practicing medicine without a license, and judgment was entered for the penalty and costs.

February 19, 1926, Roy Pierce, an unlicensed chiropractor of Newark, N. J., pleaded guilty to a charge of practicing chiropractic without a license, in the Orange District Court, and paid the penalty.

February 19, 1926, Alson J. Walker, an unlicensed chiropractor of Orange, N. J., and Charles G. Burrows, an unlicensed chiropractor of Irvington, N. J., were tried on a charge of practicing medicine without a license, and a judgment entered in each case for the penalty and costs. Alson Walker refused to pay the penalty and was committed to jail for 15 days. Charles Burrows filed notice that insolvency proceedings would be begun.

March 1, 1926, Ferdinand Beuttel, formerly of Elizabeth, N. J., pleaded guilty to a charge of practicing medicine without a license, and paid the penalty. Beuttel was tried in the Elizabeth Court in 1924, and acquitted, the Board appealed to the Supreme Court, and the judgment of the trial court was reversed and a new trial ordered.

March 1, 1926, James G. Van Middlesworth of Elizabeth, N. J., was tried on a charge of practicing medicine without a license, and judgment entered for the penalty and costs, which were paid.

March 1, 1926, Mary Bumby, an unlicensed chiropractor, was tried on a charge of practicing medicine without a license, in the Elizabeth District Court, and judgment was entered for the penalty and costs. As Mrs. Bumby was unable to pay the penalty, the Judge committed her to jail for 1 day.

March 5, 1926, Lillian Carter of Camden, N. J., was tried on a charge of practicing medicine without a license, and a judgment was entered for the penalty and costs. As she was unable to pay the penalty the Judge committed her for 20 days.

March 5, 1926, Clarence U. Pole, an unlicensed chiropractor of Audubon, N. J., was tried on a charge of practicing medicine without a license and a judgment was entered for the penalty and costs. On the same day, Wm. Joseph, an unlicensed chiropractor of Collingswood, N. J., pleaded guilty to a charge of practicing without a license and paid the penalty and costs.

March 12, 1926, Jack M. Blank, an unlicensed chiropractor of Camden, N. J., pleaded guilty to a charge of practicing medicine without a license and paid the penalty and costs. On the same day Joseph West of Camden, N. J., who was practicing electrotherapeutics, pleaded guilty to practicing medicine without a license and paid the penalty and costs. Thomas S. Dukes, an unlicensed chiropractor of Camden, N. J., pleaded guilty to a charge of practicing medicine without a license and paid the penalty and costs on the same day. George C. Lezenby, Sr., of Camden, N. J., also pleaded guilty to the same charge, and judgment was entered for the penalty and costs. This was the second offense and when Lezenby refused to pay the penalty, he was committed to jail for 30 days. Charles Schaefer of Oaklyn, N. J., paid the penalty for practicing medicine without a license.

March 16, 1926, Andrew J. Corry, an unlicensed chiropractor of Verona, N. J., pleaded guilty to a charge of practicing medicine without a license and paid the penalty.

March 24, 1926, Anna Falcone, an unlicensed midwife of Passaic, N. J., pleaded guilty to practicing midwifery without a license and paid the penalty. On the same day Carmela Suco of Passaic, N. J., was tried on a charge of practicing medicine without a license and a judgment entered for the penalty and costs. She refused to pay the penalty and was committed to jail for 60 days.

March 26, 1926, Mary Jergufski-Hammon, a licensed midwife of Trenton, N. J., was tried on a charge of practicing medicine without a license and judgment entered for the penalty and costs.

March 31, 1926, Joseph Bowley, an unlicensed chiropractor of Burlington, N. J., pleaded guilty to practicing medicine without a license and paid the penalty and costs.

April 1, 1926, Henry P. Livesey, a licensed chiropractor of Arlington, N. J., was arrested on a charge of practicing medicine without a license and pleaded guilty to the charge. The penalty and costs were paid. Mr. Livesey was practicing electrotherapeutics in connection with the practice of chiropractic.

April, 1926, Margaret Lehman of Trenton, N. J., pleaded guilty to practicing medicine without a license and paid the penalty and costs.

April 8, 1926, Edward E. Garlits, proprietor of a health food store in Trenton, N. J., was tried on a charge of practicing medicine without a license and paid the penalty and costs.

April 12, 1926, Anna Antolik, an unlicensed midwife of Whippany, N. J., and Anna Kudelka, an unlicensed midwife of Boonton, N. J., were tried in the Morristown District Court for practicing midwifery without license and judgment was entered in each case for the penalty and costs. Each filed notice of an appeal. On the same day, Adolph Schror of Rockaway Valley, N. J., was tried on a charge of practicing medicine without a license and judgment entered for the penalty and costs. He also filed notice of an appeal.

April 14, 1926, Charles R. Bremner, an unlicensed chiropractor of Pleasantville, N. J., pleaded guilty to a charge of practicing medicine without a license, in the Atlantic City District Court, and paid the penalty and costs. Joe Fox of Atlantic City, N. J., was also tried on the same day on a charge of practicing medicine without a license and a judgment was entered for the penalty and costs. He was unable to pay and was committed to jail for 10 days.

April 15, 1926, Herman North, a druggist of Bloomfield, N. J., pleaded guilty to a charge of practicing medicine without a license and paid the penalty and costs.

April 16, 1926, Hugh M. Condie, an unlicensed chiropractor of Camden, N. J., and Kathryn Mickle, unlicensed chiropractor of Fairview, N. J., were tried in the Camden District Court on charges of practicing medicine without a license and judgment was entered in each case for the penalty and costs. On the same day Kajeton F. Vaitis of Camden, N. J., who was practicing electrotherapeutics, was tried on a charge of practicing medicine and a judgment was entered for the penalty and costs. On the same day Harry F. Schwoeri of Oaklyn, N. J., pleaded guilty to a charge of practicing medicine without a license and paid the penalty and costs.

Alex. MacAlister, Secretary.



## Observations from the Lighthouse.

Inasmuch as we are publishing in this issue a symposium on Infectious Diseases and shall be engaged for some time in advocating an organized, systematic attack upon these diseases with a view to eliminating them from the state, it seemed worth while to devote our observations this month to the same subject. So, in consonance with the excellent series of original articles published herewith, we have reviewed several recent scientific contributions from high authorities, dealing with these subjects. No one speaks from greater experience in the matter of diphtheria than Dr. Park, of the New York City Health Department, and certainly Drs. George F. and Gladys H. Dick speak authoritatively regarding scarlet fever. (We have abstracted their articles so as to present the salient points for comparison with the views expressed in the symposium. Duplication will do no harm if by the consequent emphasis the lesson is better learned. At the same time, we have thought it advisable to present an abstract of one article dealing with some of the most common and most serious complications of these diseases—we mean the aural infections so frequently encountered in this group of diseases.

### SCARLET FEVER

Drs. George F. and Gladys H. Dick, who, as a result of their research establishing *Streptococcus hemolyticus* as the primary invader in scarlet fever, have evolved standardized methods for prevention and treatment of that disease, stress several points of vital importance in the successful application of these prophylactic and remedial measures (Northwest Medicine, 25:200, April, 1926). Susceptibility having been demonstrated by a skin test similar to the Schick test for diphtheria, it is necessary to administer enough toxin to produce immunity without causing harmful reactions. Since the toxin of scarlet fever is less injurious in its action than diphtheria toxin, it is not necessary to add antitoxin nor to decrease the toxicity by chemical modification in order to employ it in amounts large enough to immunize. With properly graduated doses given at intervals of 5-7 days, it is possible to immunize all susceptible persons to the point of a negative skin reaction without undesirable results. The amount of toxin required to immunize different persons varies greatly. The total 3750 skin test doses, as administered by some health departments, has been found by the Dicks to produce a negative skin in less than 50% of susceptible individuals. These authors are at present using a total of 47,000 skin test doses of toxin, administering more if necessary. The largest amount of toxin they have given any one person was 160,000 skin test doses and the largest single dose they have yet employed was 35,000 skin doses of a phenolized preparation. No dose should be out of proportion to the one that preceded it. A first dose of 500, a second of 2000, and considerably larger third doses have been given in a large series without any undesirable reactions. The reactions that do occur are either local or general. There is nearly always a swelling and reddening at the site of the injection and the first dose may be followed by general malaise, nausea and light rash. These reactions begin a few hours after injection and subside within 48 hours; they occur only in highly susceptible persons. However, severe reactions may

follow any dose that is disproportionately large, or follow the administration of toxin that is deteriorated.

Active immunity produced by injections of sterile scarlet fever toxin is developed within 1-2 weeks after the last dose; repeated skin tests on persons thus immunized have proved negative up to a period of 2 years. The effectiveness of active immunization in the prevention of scarlet fever was tested in a series of nurses and internes in contagious disease hospitals. Altogether 360 nurses and internes were found susceptible and immunized with the toxin. In spite of prolonged exposure to the disease no case of scarlet fever developed in this series, while in the control series of 242 nurses and internes, not tested or immunized, 10% developed scarlet fever. In another series of 608 susceptible persons who were immunized to the point of an entirely negative skin test, there have been no cases of scarlet fever.

It has thus been demonstrated that scarlet fever toxin may be administered with safety in doses large enough to confer complete immunity; and that this immunity is sufficiently permanent to be of practical value in controlling the disease.

After the recognition of the specific soluble toxin of scarlet fever and its corresponding antitoxin, it became apparent that, if the scarlet fever patient could be supplied with antitoxin early in the disease, his chances of recovery would be greatly increased. In order to obtain a supply of antitoxin for this purpose, horses were immunized to the toxin by subcutaneous injections of gradually increasing doses. The concentrated antitoxin is standardized against the toxin, and its potency expressed in the number of skin test doses of toxin neutralized by 1 c. c. Since it is undesirable to inject large quantities of even a refined serum, a minimum potency requirement has been established; this was such that one therapeutic dose should not exceed 20 c. c. The prophylactic dose should be one-half the therapeutic dose.

The results of the administration of antitoxin have been studied in a series of 300 cases of scarlet fever, and compared with a control series. In all cases the antitoxin has been injected into the muscles of the thigh, and if enough has been given there will be a noticeable fading of the rash within 24 hours, accompanied by general improvement of the patient; the course of temperature will depend on the presence or absence of complications. One of the most striking effects of the antitoxin has been the reduction in the incidence of complications, these occurring in 38% of the control series and in only 8% of the antitoxin series. In cases complicated by sinus infection there is often a high degree of toxemia and it may be advisable in such instances to administer 2 therapeutic doses of antitoxin. With the exception of one death due to a neglected otitis media, all the deaths in the authors' series occurred in patients who had been sick 6-28 days and had developed a hemolytic streptococcus septicemia, as demonstrated by blood cultures before the antitoxin was given.

Results show, therefore, that concentrated and standardized scarlet fever antitoxin is of practical value, if administered early in the disease and in adequate dosage.

The skin test for susceptibility to scarlet fever used in connection with preventive immunization makes possible the control of scarlet fever epidemics. In an institution where adequate facilities for throat and nose culture are available it is possible to get the epidemic under control

within 48 hours. The method of procedure in epidemics consists in making skin tests and throat cultures as soon as possible. The persons tested are divided into 2 groups—the susceptible and the immune. Each of the groups is then divided according to the results of the throat and nose cultures. The immune who show no hemolytic streptococci receive no further treatment. The immune who have these organisms in their cultures are isolated from susceptibles on the supposition that they may be carriers. The susceptible persons are also divided into 2 groups according to the presence or absence of hemolytic streptococci. Those who show these organisms are regarded as infected; they are isolated and given a prophylactic dose of scarlet fever antitoxin. In the susceptible persons who have no hemolytic streptococci in the nose or throat, preventive immunization with the toxin is started and they are protected from all possible contact with those who harbor these organisms. Since the passive immunity conferred by the antitoxin can not be depended on to last more than 3 weeks, active immunization with the toxin may be started 2-3 weeks after the antitoxin has been given, provided the nose and throat cultures have meanwhile become negative for hemolytic streptococci. This method of controlling scarlet fever has been employed in 218 families in which scarlet fever had occurred, and in 4 different institutions. No new cases of scarlet fever developed in these families or institutions later than 48 hours after control of the epidemic was undertaken, except in instances where for some reason it was not possible to follow the prophylactic administration of antitoxin by active immunization with the toxin before another exposure to immune carriers or the return of the convalescent fever patient to the home.

### DIPHThERIA.

According to William H. Park (New York State J. Med., 26:347, April, 1926), the wholesale application of the Schick test is inadvisable. As the majority of school children in large cities give a negative reaction to the Schick test, its use in these places is believed to help rather than retard the administration of the toxin-antitoxin injections, (1) because the physician is relieved of giving 3 injections to so many who are immune, and (2) because he can say to parents of children who are not immune that they will receive the treatment. In small towns and country places, however, where the majority of children are not immune, Park believes it wise not to give the preliminary Schick test. As this condition also holds good among children of preschool age, whether in the country or city, the test is omitted and the first injection of toxin-antitoxin is made to serve both as an immunizing agent and as a Schick test by being administered strictly subcutaneously.

The use of the Schick test after immunization is a different matter, as without retest one is never sure whether immunity has been effected. It has been demonstrated that with good preparations, immunity is established in about 90% of the children injected; also that a second injection will establish immunity in most of the remaining 10%. So far as is known this immunity lasts for life in the large majority of persons.

The toxin-antitoxin injection is harmless. Probably 2 million injections have been given in the state of New York alone, and no accident of a serious nature has been reported. In the whole history of this procedure the author is aware of

only 3 accidents attending the administration of toxin-antitoxin—2 resulting from a mistake in the preparation and the third from its use after having been frozen. It is reassuring to know that the new standard preparation of toxin-antitoxin universally used in this country, which contains only one-thirtieth of the amount of toxin used in the first preparation, is absolutely harmless when used after freezing and thawing.

The general immunization of adults is not recommended by Park except after the Schick test and in conjunction with a control, so that those who show marked pseudoreactions may be spared the injections or given them in divided amounts. Toxin-antitoxin produces a moderate amount of local inflammation in 2 types of cases due to 2 different substances: Young children, or those individuals who have absolutely no immunity, show a local reaction through the slight excess of toxin in the mixture; older children and adults may exhibit a tissue reaction to protein substances. The reactions may be so marked as to render individuals incapacitated for work for a day or two.

In regard to the fear among physicians concerning the administration of diphtheria antitoxin and toxin-antitoxin on account of the serum globulins in the 2 preparations, Park admits that there is no question about the definite sensitization of those who are injected. He states, however, on the basis of investigations which he has made, that there is no evidence to indicate that this sensitization produces changes which make later injections of antitoxin or serum dangerous. Regarding the advisability of changing from toxin-antitoxin to toxoid, the author is still undecided. He has used, with results equally good as those obtained from toxin-antitoxin, a preparation of toxoid made by Ramon, of Paris, and has himself prepared a large amount of toxoid according to the method described by Ramon. If the results of the use of this toxoid seem to justify the change, the substitution may be made in the course of a year or so.

### EAR AFFECTIONS DUE TO INFECTIOUS DISEASES.

Treating of ear complications in some of the acute infectious diseases, B. F. Glowacki (J. Michigan State Med. Soc., 25:211, May, 1926) states that a noninflammatory otitis media accompanies practically every pharyngeal diphtheria, but does not necessarily lead to suppuration. Neither intravenous injections nor local instillations of antitoxin into the ear sterilize the middle ear, so that the mere presence of diphtheria bacilli is not so important as a determination of the virulence of the organism. In a persistent catarrh or otorrhea following diphtheria, one should observe whether the patient has a soft palate paralysis.

The severest ear complications appear in the course of scarlet fever, arriving by one of 3 routes: (1) By direct continuity from the throat, (2) through the eustachian tubes, without involvement of the latter, and (3) through the circulation—entirely hypothetical but proposed by Politzer. About 10% of scarlet fever patients suffer with some ear disturbances; 7% come to operation and one-half this number disclose intracranial complications. About one-fifth of the ear cases in scarlet fever result in chronic otorrhea. The onset of the ear trouble is not characterized by much pain, hence spontaneous perforation is the rule, attended by extensive destruction and a subsequently protracted course. Very



rapidly progressing cases of bilateral otitis are seen in scarlatinal-diphtheria, in which condition also, a diffuse purulent labyrinthitis, following middle ear suppuration, then produces total destruction of the labyrinth and lays the foundation in the young child for deafmutism. The prognosis in the simple forms of scarlatinal otitis is favorable except in very young children and in anemic patients showing marked lymphatic tendencies.

The incidence of ear complications in patients who survive epidemic cerebrospinal meningitis is not great. The infection travels along the nerve sheathes and blood-vessels into the labyrinth, with rapid extension through perilymph and endolymph. In 4-5 weeks the membranous labyrinth is filled with granulations, and by the third month ossification has already ensued. Cochlear and vestibular functions may both be destroyed or unequally involved. Internal ear complications are not often recognized at onset because the general symptoms mask the vertigo and progressive deafness. The prognosis is, of course, most unfavorable.

In measles an infection of the external ear is a rare occurrence, but the middle ear is perhaps more frequently involved than in any other infectious disease. The usual pathway of infection is through the eustachian tube and the specific form is in reality and exanthem of the tympanic mucosa. When mastoid invasion results the destruction is rapid and justifies early operative intervention.

The incidence of ear complications in typhoid is low. Onset, which occurs about the fourth or fifth week, gives rise to only moderate local symptoms. Extensive destruction may take place but the prognosis is favorable. The typhoid bacillus in the discharge is illusive and can be found only intermittently. Zeidler observed that an otitis seemed to prolong the course of the fever and that in patients who had a chronic suppuration a fresh infection resulted promptly at the onset of the fever and usually led to nearly total deafness. The internal ear is usually spared.

Although deaf-mutism has been observed following pertussis, ear complications are rare in this disease. In serious cases of small-pox, otitis media may be encountered, but even here it is mild in character. Mumps may be accompanied by a specific toxic labyrinthitis, which is very destructive. It is usually of sudden onset, with tinnitus, progressive deafness ensuing perhaps even without vertigo. The pathology has been described as neurolabyrinthitis and localized meningitis. The frequency of ear complications in influenza varies in different epidemics. Bullous swellings filled with sanguineous serum may arise on the drum membrane and a similar exudate soon fills the middle ear cavity. The tendency to hemorrhage and the high toxicity occasionally attack the labyrinth or eighth nerve without a middle ear suppuration being present. The prognosis in such cases is particularly unfavorable.

Early paracentesis is the best step toward a favorable subsidence of the ear complications of infectious diseases.

#### ABOLITION OF DIPHTHERIA AND SCARLET FEVER.

New York, as was pointed out in our May Journal, has inaugurated a state-wide campaign for the obliteration of diphtheria. Some other smaller communities have successfully waged such a beneficent warfare. The city of Syracuse, for instance, had no case of this disease in a

period of 2 years. It would seem to be quite possible now to wipe out both diphtheria and scarlet fever if we could get the public awake to the possibilities and get unified action from the public and the profession. Certainly it is worth while to stir up interest and try to get all the health agencies in New Jersey working for the abolition of these diseases.

When we recall what has been done in this state in the almost complete control of typhoid fever and malaria, and realize how easy it would be to abolish the lesser evils under consideration, it does seem that we should get busy on the development of such a campaign.

### In Lighter Vein

#### Moth Bawls.

I often think as the sun sinks low  
Of moths in the days of old,  
And I shed a tear in the lamplight's glow  
As I think of their woes untold,  
When knights of old wore armor cold  
Instead of tasty cloth—  
For iron and steel  
Are a helluva meal  
To feed a hungry moth

(Arthur L. Lippmann)

#### Styles in the Hereafter.

A revival was raging in a Virginia colored church. The fruits had been considerable. One obdurate soul, however, resisted the efforts of the elder. Called to account for his reluctance, he replied:

"Yo' see how it is, Elder. I'se got a problem. I don't see how I'se gwine git mah shirt on ovah mah wings when I gits to Glory."

"Dat ain't yo' problem," retorted the exhorter promptly. "Yo' problem is how is yo' gwine git yo' hat on ovah yo' horns."—(Everybody's Magazine)

#### Damaged Enough Already

Lawyer (helping pedestrian up)—"Come with me, my man. You can get damages."

Pedestrian (groggy)—"H'vens, man I got all the damages I want. Get me some repairs."—(New Smyrna Breeze.)

Social Psych. Prof.—What rule may the novice follow to avoid hitting his thumb while driving a nail?

A student—Holding the hammer with both hands.—(S. California Wampus.)

#### A Run of Luck.

"Did you give your penny to the Sunday-school, Robert?" asked the mother.

"No, ma, I lost it."

"What lost another one? That makes three Sundays straight you've lost your penny."

"Yes, but if I keep it up I'll win 'em back. That kid's luck can't last forever."—(Am. Legion Weekly.)

The exercise that reduces the waist-line most quickly consists in placing both hands on the table and pushing back.—(Nashville Tennessean)

Parent (anxiously)—Nurse, is it a "him" or a "her"?

The Nurse—It's a "them!"—(Answers.)

## Lay Mirror Reflections

### CONTROL OF DIPHTHERIA.

Concerning the campaign now in progress in New York State, for the abolition of diphtheria, the newspapers have had considerable to say, and much of this lay discussion of a problem so essentially medical in character has a practical value for the physician.

The effects of the Syracuse demonstration are well defined by the New York Sun, of May 14, in the following editorial:

#### SAFETY FROM DIPHTHERIA.

Following encouraging reports on the progress of the diphtheria immunization campaign in Syracuse comes word of a systematic attempt to eliminate that disease from the section of New York city centering on the baby health station at 240 East Fortieth Street. It is part of the general program of the Bellevue-Yorkville health demonstration. All health agencies in the district are coöperating and it is supported by the Milbank Memorial Fund.

Dr. George C. Ruhland, Deputy Commissioner of Health and Director of the Syracuse Health Demonstration, reports satisfactory progress toward the immunization of all the 34,000 children of Syracuse by the toxin-antitoxin treatment. Approximately 10,000 have been treated already. Within three years it is hoped to make immunization complete, leaving little to do but to take care of newly born children and those recently brought into the city.

As has happened wherever immunization has been practiced on a comprehensive scale, Syracuse shows a declining incidence of the disease in proportion to the extent of immunization. In 1924 the death rate from diphtheria had fallen to 9 for each 100,000 of population, after having been in two figures from the beginning of the century. Last year it dropped to the unprecedented figure of 2.6. Such a decrease would be incredible if it were not that it is the common experience where the treatment is widely adopted.

The chief problem is, of course, that of educating parents. Once they can be persuaded that toxin-antitoxin is harmless and sure in its beneficent effects the rest will be comparatively simple. Many parents who know about antitoxin for treatment of the actual disease are as yet uninformed that the toxin-antitoxin treatment is a different one altogether, intended not to cure diphtheria but to prevent it.

For the instruction of such in the Bellevue-Yorkville district a leaflet is being circulated which is described as being a message from Commissioner Harris of the Department of Health. It consists of simple statements to the effect that the parent can save his children from diphtheria, that three doses of toxin-antitoxin, injected at intervals of a week, will prevent diphtheria and that it will not hurt a child or make him ill. Parents are urged to take all children over nine months of age to the family doctor for treatment. If they cannot afford to pay for the service they can get it free by applying at the baby health station.

This particular neighborhood campaign is only a beginning. Gradually it will spread through-

out the city and in five years, it is hoped that diphtheria will have been wiped out of New York.

Coincidentally, the New York Times, May 13, discusses the same topic:

#### DIPHTHERIA CAN BE CONQUERED.

It is not creditable to the intelligence and knowledge of our time that though diphtheria can be both prevented and cured by the use of a specific known to all, that dreadful disease still continues to claim its child victims in our towns and cities. The victims are by no means so numerous as they were before the use of antitoxin became frequent, but that there should be any at all is quite needless.

It is with the purpose of making these facts known to all parents that there now is in progress here, financed by the Milbank Memorial Fund and with the coöperation of the Board of Health, what is called the "Bellevue-Yorkville Demonstration." It is a campaign to immunize with toxin-antitoxin all the children in the district served by the baby health station at 241 East Fortieth Street. The object is not only to save these children from diphtheria, but also to prove that the disease can be banished from the whole city by doing what is done in this one section.

There is no doubt what the result will be as regards the children to whom are administered the needed three injections of toxin-antitoxin at intervals of a week apart. They will be made quite safe, and at no cost of either pain or illness, but of course it still will be possible for occasional cases of diphtheria to be brought into the district. These, if antitoxin is given three times, can nearly all be cured, but the experiment will not be carried on as satisfactorily as it would be if the whole city were covered, as have been some of the smaller cities up-State, including Auburn.

The new clinic was opened May 5, and its call has met an eager response from the mothers of the district.

#### WARRING ON THE MOSQUITO.

It is always pleasing to learn of recognition of one's good deeds, and New Jersey may now take unction to her soul from the compliments being bestowed in appreciation of her mosquito extermination warfare. Having been the butt of most mosquito and malaria jokes for many years, it is decidedly agreeable to find the one-time jokers referring now to this state as the model in dealing with these pests, the disease and the disease carrier. Thus are we held up as an example to the rest of the world, in an editorial in the New York Times of April 30:

At Grant's Pass, Oregon, the mercury stood at 98° yesterday. Summer may sit down hard in the lap of Spring hereabouts at any time now and refuse to get up until the woods are in full leaf. The season has been lamentably backward, but with rising temperature the jazz of mosquito bands will soon be heard. In April 47 states turned to New Jersey to learn the rules of extermination. Long ago it took the lead in campaigning against the nuisance, with such success that millions of dollars have been added to taxable



values. New Jersey was stung into action not by the mosquito, but by the libel that all the pests that devastate the North Atlantic States are born within her territory. It was a wicked invention, accepted as gospel truth by generations of New Yorkers.

Last August our own Board of Health began a drive in the 3 greater boroughs against mosquito hordes that were taking all the joy out of life by the bite that follows the buzz. Sanitary supervisors earned the gratitude of New Jersey by manfully acknowledging that mosquito clouds originated here, although it had to be admitted that they were thickest in Canarsie, Jamaica and Flatlands. The Corona and Flushing marshes also bred their millions. As a matter of fact, mosquitos are natives all the way from Nogales to Point Barrow. In the woods of the White Mountains and the Maine Wilderness they make life almost insupportable in July. A census would show that most parts of New Jersey are heavenly by comparison. In that Commonwealth the smallest stiletto-wielder on earth, the midge, is a rarity, whereas in the high New England woods he draws more blood than mosquitos many times his weight.

New Jersey is determined to exterminate the mosquito. Josh Billings was entirely wrong when he said that the musketeer has inhabited this world since its creation, and will hang around here until business closes. The State Entomologist, Dr. Thomas J. Headlee, promises that the mosquito will vanish from New Jersey if the authorities do their duty. It depends upon the strength that is in union and the poisons that can be used on still water, whether it be in a marsh or a tomato can. The coastal regions, with the aid of the state, are draining and kerosening so methodically that in the course of 6 years the salt-water breed should be only a memory. So says Dr. Headlee.

It is now 300 years since mosquitos pestered the settlers of New Sweden on the Delaware so abominably that they built a fort called Mockeborg as a refuge. Science has at last doomed the mosquito. It was not until 1900 that New Jerseymen stood their ground and began to fight their tormentor with petroleum and chemicals. In 1905 the Legislature provided funds for the draining of marsh land by municipalities. Elizabeth was one of the first towns to take the field. South Orange enlisted early. Newark girded on its armor in 1905. There came a time when the Legislature appropriated \$350,000, and the war was on in earnest. What has been settled is this: Malignant New Jersey can be made a mosquitoless state. Some day the 6 citizens of Elizabeth who each contributed \$25 to oil the meadow at the foot of Schiller Street will have a monument raised to them as pioneers in the cause of withstanding the raids of mosquitos.

Every year the New Jersey Mosquito Extermination Association holds a convention at Atlantic City to compare notes and plan the annual campaign. Scientific men from far and wide attend. At the last meeting Assistant Director Arthur Stringer of the Gorgas Memorial Institute declared that mosquitos caused 3,000,000 cases of malaria annually. He estimated the economic loss at \$100,000,000. This was probably a cautious statement. Moreover, it ignored the blight suffered by communities which would have much higher property appraisals if the pest were swept away. Kerosening as a remedy has been a god-send, but the Department of Agriculture has shown that wide areas can be rid of mosquitos

by scattering paris green dust and deadly chemicals from airplanes. For all their ferocity they can easily be disposed of. The paris green dust when mixed with Tripoli earth is most effective. The Chemical Warfare Service has been very helpful with suggestions. Dr. William Rudolph of the New Jersey Agricultural Experiment Station treats waters in which mosquitos breed with copper sulphate. Dr. Jacob G. Lipman, another New Jersey specialist, calculates that a million idle acres in the state could be opened to cultivation by exterminating the malaria-carrying mosquito.

#### NEW MEDICAL PRACTICE ACT FOR NEW YORK.

Under the title, "Smith Signs Bill for Doctors' Registration", the Newark Evening News, May 17, publishes the following item:

Governor Smith today signed the Webb-Loomis medical practice act, designed to drive "fake doctors and quacks" out of business in the state.

In memorandum the Governor set forth that the measure would not affect the practice of any cult or practitioner of healing so long as they did not disobey the law, particularly in attempting to diagnose diseases. Chiropractors have claimed the bill would drive them out of business in the state.

Under the new act, no one not properly qualified can use the title of doctor, and physicians must register annually with the secretary of the State Board of Medical Examiners. This list is to be public property.

The medical profession is empowered to set up an organization similar to the Bar Association to "clean its own house", as the Governor expressed it, while all prosecutions of violations will be in the hands of the attorney general.

In a more extensive report of the Governor's message accompanying his endorsement of this new law, the New York Times, April 18, says:

"I regard it as highly important", the Governor wrote in his memorandum, "that the ignorant and the unthinking be not misguided by the use of the title 'doctor', because it presupposes in the minds of a great many people a knowledge of the human anatomy sufficient to enable the holder of such title to diagnose and prescribe for all the ills the human body is heir to.

#### Health a Government Function.

"The title 'doctor' should be made by law to mean what the great majority of people believe it means and it should not be promiscuously bestowed upon individuals so lacking in proper qualifications as to be unable to tell the difference between indigestion and hydrophobia. There is no function of Government to my mind more important than the preservation of the public health.

"The proposed amendment to the Medical Practice act contained in this bill did not take away from any individual or group of individuals any right now possessed by them under the provisions of the law as it now stands and which have existed in their present form for more than

twenty years, but it does provide for a better administration of the medical preservation of the health and lives of the people of our commonwealth."

In his memorandum, the Governor recalled the fact that in the Fall of 1924 he called a conference of representatives of the State Department of Health, the State Medical Society and the State Department of Education for the purpose of considering an amendment to the Medical Practice act. In 1925 a bill similar to the one approved today was passed in the Assembly, but was defeated in the Senate.

"The situation now, as at that time, demands remedial legislation", the Governor wrote. "Attempts made in the past have failed for one reason or another, notwithstanding the fact that it could not by any stretch of the imagination be made either a political or a partisan measure, as it concerns only the health and lives of the people of the State."

#### **Status of Cults Unchanged.**

Pointing out that the bill has the unqualified support of the State Department of Health and the State Education Department, the Governor said that the heads of these two departments were prepared to assume with him the full responsibility for the following statement:

"1. This bill if enacted into law will not stop any one from plying any occupation involving the public health who could legally do so before its enactment into law. That means that it does not restrict the existing rights of any individual or any group.

"2. Although no cult is licensed to practice in this State, it does not stop the practitioner of such cult from practicing the tenets of that cult from any manipulations or any other form of treatment, provided such practice does not involve a violation of the Medical Practice act or any other section of the public health law as it existed before the enactment of this bill."

Commenting on the provision of the bill requiring annual registration of physicians, the Governor wrote:

"It requires very little explanation to show the necessity for this very wise regulation. Prior to the enactment of the dental law thousands of unlicensed practitioners were practicing dentistry in the State. Some of them were unfit to practice on lead pipe, not to speak of experimenting with human beings."

Both last year and this year the Governor in his annual message to the Legislature recommended the passage of a measure similar to the one he approved.

#### **Bars "Doctor" Title by Chiropodists."**

The Governor vetoed the Karle bill, which would have permitted a chiropodist or podiatrist to use the title of "doctor" in advertising signs.

"It is apparent on the face of this bill," the Governor wrote, "that the proponents hope by its provisions entitling chiropodists and podiatrists to use the title 'doctor' or the abbreviation thereof, to escape the provisions of the amendment to the public health law already signed by me."

The invention of the harp was due to an accident, we read. On the other hand, the inventor of the bag-pipes was a Highland cottager who got the idea through stepping on a cat.—Punch.

## **County Society Reports.**

### **ATLANTIC COUNTY.**

Joseph H. Marcus, M. D., Reporter.

The monthly meeting of the Atlantic County Medical Society was held on the afternoon of May 14, at the Atlantic County Hospital for Mental Diseases, Smiths Landing, New Jersey. Dr. D. Ward Scanlan presided.

Dr. W. Blair Stewart, reporting for the Welfare Committee, stated that the New Jersey State Board of Medical Examiners is continuing to prosecute "Fake Practitioners". He further urged that all chosen delegates attend the annual convention of the State Society in order that the county may be properly represented.

The membership application of Dr. Walter Blair Stewart, Jr., was received and referred to the Board of Censors. A communication was read from the Chamber of Commerce, in which a request of \$200,000 was asked from the City Budget to be expended for advertising Atlantic City. It was unanimously moved that the County Society endorse this procedure.

Dr. Conaway, reporting for the Board of Censors, stated that the following applications had been favorably acted upon; the new members being Doctors Hilton S. Read, S. Eugene Dalton, Harry F. Subin, Laurence Wilson and S. E. Bateman.

The society voted to tender a testimonial dinner in honor of Doctor J. Scott and P. Marvel, Sr., to be given on the date of the annual meeting. The committee appointed by the president to arrange for this affair is as follows: Drs. W. Blair Stewart, W. P. Conaway, W. J. Carrington, J. H. Mason, E. F. Uzzell, J. H. Marcus and J. C. Brown.

The Scientific Program was inaugurated by Dr. Edward Guion, Superintendent and Director of the Atlantic County Hospital for Mental Diseases. He presented a very entertaining and interesting dissertation relative to the status of patients admitted and also presented a complete discussion of the laws relating to the commitment of insane people.

Dr. Stanley McGeehan presented a case of Granuloma Inguinalis. The Scientific Program was then continued by Dr. Charles S. Potts, Professor of Neurology at the University of Pennsylvania, and Consultant to the Hospital for Mental Diseases, who stated that he has been connected with this institution since 1897 and found his work extremely interesting. He outlined the form blank necessary for the commitment of all insane individuals. All people who are mentally ill or who present mental symptoms are not insane and this should be borne in mind at all times. He discussed in detail the neuroses, doubting manias, kleptomania and pyromania; the phobias as embodied in those who are in constant dread of dirt, closed places, and open spaces; the neurasthenics and those who constantly indulge in introspection. He outlined mental symptoms associated with visceral disease such as pneumonia chronic nephritis with uremia and cardiorenal disturbance. The feeble minded child he discussed as to the different grades of idiocy. In discussing symptoms of mental disease, Dr. Potts stated that hallucinations are often confused with delusions which are not necessarily symptoms of insanity. Tumor of the brain may be the cause of hallucinations and is at times evidence of a toxic psychosis or exhaustion psy-



chosis, which symptoms are not infrequently fleeting in duration. Caution is necessary in making a diagnosis that delusion exists.

Delusion of persecution is especially common in paranoia and melancholia.

Dementia, the third important symptom of mental disease, is usually the terminal symptom. In senile dementia the loss of memory is a prominent factor noted.

Dr. Potts stated that some of the most important causes of mental disease are as follows: Alcohol, syphilis and masturbation. Aphasia is not an evidence of insanity, Dr. Potts concluded his presentation with cases typifying various forms of insanity.

Following the Scientific Meeting, Dr. W. Blair Stewart moved that a vote of appreciative thanks be extended to Dr. Edward Guion, director of the Atlantic County Hospital, for the hospitality extended.

#### Atlantic City Hospital Staff.

Joseph H. Marcus, M. D., Reporter

The stated monthly meeting of the Atlantic City Hospital Staff was held on the evening of April 16, 1926, at the Hotel Breakers. Due to the enforced absence of the president, Dr. Richard Bew, the meeting was called to order by Dr. Samuel L. Salasin, Vice-President.

Following the dispensation of routine business procedures and committee reports, the Scientific Program was presented. Report of Surgical Service by Drs. C. H. de T. Shivers, C. L. Bossert and Stanley McGeehan.

Report of Medical Service by Drs. D. W. Scanlan and Harold Davidson.

Dr. Charles Bossert presented a statistical report of the number of cases treated, as follows:

Acute urethritis.....	77
Chronic urethritis.....	218
Stricture of urethra.....	26
Enlarged prostate.....	48
Seminal Vesiculitis.....	7
Epididymitis.....	17
Inguinal adenitis.....	6
Peri-urethral abscess.....	3
Paraphimosis.....	3

Chief of Clinic, C. H. de T. Shivers, stated that the total cases cystoscoped were 51 in number. In 14 cases the finding were negative. There were 4 cases of renal and ureteral calculi, 2 in females and 2 in males. One involved the left kidney and ureter and 3 involved the right kidney and ureter. One case in an adult male showed a deformity of the posterior wall of the bladder and a blocking of the left ureter due to some external pressure. There were 16 cases of pyelitis, 5 in women and 11 in men. In 2 women there was bilateral pyelitis associated with stone in the right ureter. In 4 cases, pyelitis involved the right kidney, and 1 of these cases was associated with pregnancy. In the males there were 2 cases of bilateral pyelitis and in 1 of these a secondary cystitis and posterior urethritis. This series also comprised 2 cases of pyelitis on the right side and 7 cases involving the left pelvis; 1 case was that of a boy 2½ years old with an involvement of the right kidney; 2 cases of hydropyonephrosis involved the left kidney, both in adult males; 2 cases of carcinoma of the bladder involving principally the base, both in adult males; 1 case of posterior urethritis and seminal vesiculitis; 4 cases presented prostatic enlargement and 2 vesiculitis, the latter associated with a secondary cystopyelitis. One of the cases had a filiform stricture of the urethra just anterior to the bulb.

The chief symptom of this case was backache.

Of the 4 cases of pyelo-nephritis, 2 there was males and 2 in females. In the males, there was 1 case of acute pyelo-nephritis, involving right kidney and the other a bilateral pyelo-nephritis complicated by renal calculi. A nephrotomy was performed for the removal of the stone from the kidney; the stone being composed of triple phosphate.

In the 2 females who presented pyelo-nephritis involving the right kidney there were complications of stones. Of the 2 cases presenting obstructed ureters, both were males; in 1 the block was due to mucus, with a secondary hydronephrosis. The dye output was demonstrated in 11½ minutes, the catheter remaining in situ 2 hours. The second case was due to stone and the obstruction was 1 cm. from the bladder orifice. Stone was successfully passed.

Among the operations performed were the following: Radical hydrocele, epididymotomy; vas puncture for severe inflammation of the seminal vesicals, internal urethrotomy, inguinal adenectomy, total extirpation of the penis for carcinoma.

Following these reports, Dr. Shivers demonstrated photopgraphs showing clinical and microscopic appearances of these cases of carcinoma of the penis.

The Genito-Urinary Service report was concluded by Dr. S. McGeehan who presented a case report of Granuloma Inguinalis. This case was of a colored girl 13 years of age who was brought for treatment by the Welfare Bureau, the patient having been apprehended in a vice raid. The chief complaint was painful sores around the vulva and peritoneum. Personal history was negative with the exception that she was an inmate of a house of prostitution. The present illness commenced with small pain areas on the vulva, with a vaginal discharge about 6 days previous to admission. She stated that these sores increased in number and size, spreading rapidly over the vulva and perineum, and causing considerable pain when walking. The important finding upon physical examination centered about the genitalia. There was a purulent discharge from the urethra and vaginal orifice. The adjacent perineum, and extending anterior to the pubis, was an almost confluent granulomatous mass, raised above the skin, with reddened ulcerated surfaces exuding a watery discharge. On the perineum adjacent to this and part of the inner aspect of the thighs were a few similar areas of various sizes, the larger being somewhat reddened with the overlying skin appearing about to break down. Blood Wassermann was negative. Gonococci were found in the vaginal smear but no spirochetes could be found. A report on another smear was suspicious of *Bacillus capsulatus*, which later was confirmed as positive from the culture. The treatment consisted of an intravenous administration of tartar emetic. Following the fifth injection, given at intervals of 2 days, the lesions disappeared.

Dr. McGeehan concluded his report with a brief history of symptoms, diagnosis, prognosis, and treatment. The discussion of the genito-urinary service report was inaugurated by Dr. R. A. Kilduffe, Director of the Laboratories. He pointed out that the laboratory facilities offered a far greater scope of work than those procedures confined to routine work and urged a more intensive bacteriologic study and classification from the genito-urinary services.

Dr. D. Ward Scanlan felt that in carcinoma of the penis where there was a secondary involvement showing metastasis to the spine, operation was not advisable; further stating that at the Mayo Clinic this thought was rigidly adhered to.

Dr. D. B. Allman was particularly interested in the secondary spinal involvement resulting from carcinoma of the penis. He felt that operative procedure should be resorted to in certain cases and recounted 4 cases in which he was firmly convinced that surgical interference, as performed by him, was of benefit.

Dr. C. B. Kaighn spoke of x-ray treatment of this condition.

Dr. Joseph H. Marcus, in discussing congenital syphilis, thought that best results were obtained by intramuscular injections of sulpharsphenamin. One of the most important reasons being its extreme solubility. Dr. Marcus briefly outlined a case of syphilitic nephritis in a baby 3 weeks of age and urged a more extensive use of cystoscopy in infants and young children.

Dr. Clarence L. Andrews presented an interesting view point centered about the exhibition of genito-urinary specimens and procedures as witnessed by him at the recent meeting of the Congress of Internal Medicine, held in Detroit.

Dr. Samuel L. Salasin, health officer in Atlantic City, complimented Dr. Shivers and his associates upon the vast amount of work performed at the Venereal Clinic and extended a cordial invitation to all members of the staff to visit this clinic.

The Scientific Program was resumed by Dr. D. Ward Scanlan with a report of the Medical Service. The total number of cases for his service extended over a period of 3 months. There were 133 cases, with a mortality of 10%. The autopsies numbered 7 and the consultations 45. The average number of days in the hospital per patient were 5 days for males, and 9 days for females and 13 for children.

Among the interesting cases outlined was one of pneumonitis with acute purulent pericarditis. This was in a colored male, 30 years of age, who died 3 days after admission. The blood culture and other laboratory procedures were negative. The principal medication was quinin and urea chloride. The important autopsy findings showed an enlarged, thickened and adherent pericardial sac, adherent to the lungs and mediastinum, the effusion being purulent in character and approximately 1 liter in quantity; streptococcus was obtained. Consolidation at base of right lung.

Case 5059—Adult female admitted with acute lobar pneumonia in the right lower lobe. Among other findings were hypertrophy of the heart, interstitial fibrosis, and fatty infiltration of the liver and fibromyoma of the uterus.

Case 94—Adult male, acute lobar pneumonia with chronic interstitial nephritis.

Case 4555—Female 48 years of age. Acute bronchial pneumonia and chronic nephritis.

Case 4433—Adult male, 39 years, admitted and died on the same day. Condition was a streptococemia resulting from a carbuncle of the neck. Blood culture demonstrated streptococcus. Among other cases Dr. Scanlan discussed as to etiology, diagnosis, and treatment, were cases of chronic myocarditis, cerebral hemorrhage, acute cardiac dilatation and various phases of kidney infection, pneumococcus meningitis and retropharyngeal abscess.

Dr. Scanlan concluded his report with a clin-

ical discussion of aneurysm in a female 50 years of age. The autopsy performed by Dr. Kilduffe, showed the following condition:

Body of an adult white female about 50 years of age. No external scars or marks; no evidence of trauma, edema or jaundice. Thorax: The pericardial sac was much distended, tense, and discolored with blood. When punctured a large amount—approximately 400 c. c. of blood escaped under pressure. The heart was approximately normal in size, and the muscle firm though there was evidence of a perceptible degree of fatty deposit. The first portion of the aorta was fusiform in shape and dilated, the diameter in the widest portion being 2.5 inches. The walls and the surrounding tissues were much infiltrated and discolored with blood. There was some hypertrophy of the left ventricular wall; no evidence of valvular lesions. The intima of the aorta was of irregular consistency, areas of both softer and more sclerotic appearance than normal being irregularly distributed; in softened areas the intima was friable and easily torn. There was a tear about 1 in. in length in the intima of the first portion of the aorta through which hemorrhage had occurred dissecting the outer coats from the intima, these being much distended by the escaping blood for a distance of 2-3 ins. The bleeding into the pericardial sac was, apparently, by osmosis as there was no tear discovered in the outer walls of the vessel.

The right lung showed the presence of some dense old adhesions which were separated with difficulty. The left lung was free. On section there was no evidence of tuberculosis or pneumonic lesions; no free fluid in the pleural cavities.

Abdomen: No free fluid. Stomach normal except for a few adhesions in the region of the pylorus. Small, scattered adhesions between the intestinal loops were encountered but were without moment. Gall-bladder normal in size and contained rather thick bile. No stones. The liver was approximately normal in size but one section was pale yellow in color and presented the gross signs of fatty infiltration of perceptible degree.

The kidneys were somewhat small in size, the capsule stripped with difficulty leaving a granular surface and the gross appearance was that of a chronic interstitial nephritis.

The fallopian tubes were normal and the ovaries presented no abnormalities. The uterus was long and narrow and of irregular contour, and on section were many small intramural fibroids.

Cause of Death: Dissecting aneurysm of the ascending portion of the aorta and hemopericardium.

Dr. Harold Davidson presented in detail a case that embodied endocrine insufficiency. The patient, 35 years of age, died 2 hours after admission. Doctors Scanlan and Davidson expressed appreciation to their associates and to the resident physician for their willing and constant cooperation during the time of service.

In the discussion that ensued, Dr. W. E. Darnall reported a case of splenic anemia; Dr. Charlton reported a case of retropharyngeal abscess which extended into the middle ear; Dr. Clarence Andrews discussed the various phases of treatment of pneumonia.

Dr. Salasin appointed the following committee to arrange for the annual outing of the staff: Drs. J. H. Mason, chairman; C. B. Kaighn, H. S. Read, J. C. Brown, and J. S. Irwin.



BERGEN COUNTY.

H. B. Wolowitz, M. D., Reporter

The Bergen County Medical Society held its regular meeting at the Hackensack Hospital on May 11. Following the business part of the meeting the scientific program was presented. It consisted of a talk on the "Diagnosis and Treatment of Thyroid Disorders", given by Dr. Emil Goetsch, who said, in part: To have a clear understanding of thyroid disease it is necessary first to know the structure and pathology of the gland. Normally the thyroid is made up of acini containing variable amounts of colloid, interstitial cells and a few clumps of fetal cells, called fetal rests.

Now, the thyroid may retrogress and then we have the acini full of colloid; this always indicates a resting gland, with the margins of the acini smooth and regular, and its epithelium of the low, flat, columnar type. This is the kind of gland often seen in school-girls in goitrous regions. Next, we have a gland whose activity has been increased a little, such as in the mild primary hyperplasia of puberty. Here the acini become increased in number, their margins become irregular and wavy, the epithelium is columnar, colloid is decreased in amount, and the whole gland is slightly enlarged. There are symptoms of a mild hyperthyroidism. Then, there is the gland whose colloid is all, or practically all, gone, whose acini are very wavy, with high columnar epithelium and nuclei rich in chromatin. This gland is very cellular and may be enlarged. It goes with exophthalmic goiter and its intense toxemia.

In the hyperplasias just considered the whole gland was involved, not any small portion of it. Now we must go back to the fetal rests mentioned before. These are at first microscopic clumps of cells scattered through the thyroid tissue, numbering from a very few to hundreds. They are always circumscribed, and when being removed peel out easily. If a tumor does not shell out easily and is not circumscribed it is not an adenoma. These cells may grow and form adenomatous goiters, which are benign. They never cause exophthalmos, nor do they have an increased circulation with its thrills and bruits. Some may be toxic, but never as much so as the exophthalmic goiter. Sometimes, relatively rarely, however, the fetal cells invade the entire thyroid causing the other structures to atrophy. This is diffuse adenomatosis.

The foregoing classification is very simple and covers easily 90% of thyroid conditions. Of course there may be more than one condition in the same gland, such as adenoma together with an exophthalmic goiter, though this is rare.

Regarding treatment. Adenomatous goiters if left alone long enough, possibly for 30 years, become degenerated and cystic; thus curing themselves. But while they are young they give symptoms. These tumors often grow down into the mediastinum, causing pressure symptoms. They can and often do become tremendously large. They may degenerate, as all tumors can, becoming cystic, myxomatous, fibrotic, atrophied or calcified. There is no medical treatment for adenoma, any more than for any other tumor. Xray is useless, as is also iodine. If there are symptoms, surgery is the only form of treatment to be considered. The results are very satisfactory, and we can absolutely promise the patient that she will be well. At operation all the nodules should be taken out, remembering that

they are always bilateral. Or, a partial resection may be done.

In the diagnosis of hyperthyroidism the marked sensitivity to adrenalin is a great aid. Nowadays we have means of determining the metabolic rate and this is used instead of the adrenalin test. In marked cases of exophthalmic goiter medical treatment is very unsatisfactory. Iodine when given is pleasing at first, gives improvement for a short time, but soon there is a relapse and the patients are sicker than ever; furthermore, if iodine is now given it is almost useless, so that frequently the original course of iodine serves only to defeat the surgeon's end by making the patient a poor operative risk for a complete lobectomy at once, and necessitating ligation first. Surgery is the proper treatment for exophthalmic goiter as well as for adenoma. And, iodine should not be given except as a pre-operative measure. Of course there are some cases, very rare, that are apparently cured by iodine. But there are cases, too, that are cured by nothing at all. When a case is not doing well on treatment, do not wait, operate.

In preparation for operation give sedatives, any kind will do. Digitalis is useless, for it will not reduce the pulse rate. Give Lugol's solution, 10 minims t. i. d. for one week; then if the pulse and metabolic rate have not come down sufficiently give 15 minims t. i. d. for 3 days more. Now the patient is protected against postoperative crises. If for any reason Lugol's solution cannot be given by mouth give sodium iodide 15 gr. intravenously every day for 8 days.

Iodine when given to hyperplasias causes a retrogression to the colloid type, and when an exophthalmic gland is treated with iodine it swells; due to the collection of colloid.

To prove that operations on the thyroid are not dangerous even without iodine or metabolic rate estimations, I submit the following:

Mortality Statistics.

	No.	Mort.	Per cent.
Ligations .....	152	2	1.31
Excisions in			
Exophthalmic goiter....	243	5	2.05
Adenomatous goiter ....	299	0	0
Puberty hyperplasia ...	26	0	0
Simple colloid .....	31	0	0
Diffuse adenomatosis....	13	0	0

Total for all operations....764.....7.....0.92

The cases making up the above statistics were not chosen cases; they were taken as they came.

Colloid goiters are not surgical unless pressure symptoms demand intervention. They should be treated before the patients reach the age of 20, for after that time iodine has little effect. Hyperthyroidism must be excluded by asking about sweating, loss of weight, tremor. Lugol's solution, 3 minims daily is sufficient; larger doses are unnecessary and may cause a gland to swell. To whip up the metabolism a little, for these patients are sluggish, feed thyroid ½ gr. to 2 or 3 gr. daily. Watch for signs of hyperthyroidism and if they appear drop back in the dosage. It is often a good idea to work up to early symptoms then drop back to a dose just sufficient to supply the patient's needs without toxic signs. The iodine should be administered intermittently, 10 days on and 10 days off is a good plan.

The cure of colloid goiter takes a long time. The patient should be prepared to take treatment for at least 3 months, usually longer.

In adenoma and exophthalmic goiter do not

use iodine. In active cases x-rays are useless, and may do harm. Even after operation a gland that has been rayed is not as well as one that has not been rayed, for it has been injured by the x-rays.

Questions asked by members of the society were:

Dr. Cone—What is your opinion on the general use of iodized salt?

Dr. Wolowitz—What about the treatment of puberty hyperplasia?

Dr. Helf—Do you use digitalis in bad hearts preoperatively?

Dr. P. Liva—Is there any difference between Lugol's solution and sodium iodid in certain cases?

Dr. Sullivan—Isn't the x-ray of any value at all in certain cases?

Dr. Corn—What is the significance of the size of the gland? At what metabolic rate do you consider a patient safely operable? What anesthetic do you recommend?

Dr. Trossbach—What is the causal relationship between infection and hyperthyroidism?

Answers by Dr. Goetsch: In iodine deficient communities iodized salt helps the colloid goiters and does no harm to the healthy. It is useless where goiter is not endemic, but harmless due to the very small doses present.

As regards puberty hyperplasia. Try not to operate, if possible. The results of treatment are very slow in showing and both the patient and physician become restless. Try to enforce rest generally, of both body and mind. Avoid worry, overwork or overstudy. Give sedatives such as luminal  $\frac{1}{2}$  gr. b. i. d., (this is very good here), quinine hydrobromide 3 to 5 gr. b. i. d. in capsules. The Forchheimer pill with ergotin is also good. In these cases a few carefully given treatments with the x-rays may be of some benefit. A man experienced in this kind of work should be the only one to give such treatments; any technician should not be permitted to try them. Iodine 2 to 3 min. daily for a short time with the patient under close observation may be beneficial. Sometimes thyroid  $\frac{1}{2}$  gr. daily is tried. If none of these seems to do any good the only thing left is operation. They do very well, too.

Marriage and pregnancy make adenoma and hyperthyroidism worse.

I sometimes use digitalis but mostly not. I do no object to it, but I see no good from it.

Sodium iodid is more effective than Lugol's solution. The end effect can be gotten in about 6 days, whereas Lugol's takes about 10.

X-rays may be tried in mild cases. Iodine has replaced both x-rays and ligations.

Size is no index of toxicity. Marked hyperthyroidism may be present without any appreciable enlargement. The metabolic rate and the patient's general physical condition are the important considerations. Before the days of iodine we went by the rule that any metabolic rate over 50 meant ligation first. Under 50—single lobectomy. Under 25—double lobectomy could be done. Having given the preoperative course of iodine, if the metabolic rate does not come down below 35, ligation first may still have to be done. Below this, a double lobectomy is quite safe.

The anesthesia is not so important. I use nitrous-oxide for all cases, without ether.

The etiology of hyperthyroidism is still obscure. Infections are not necessarily a cause, for too many previously healthy people get it. But any focus of infection throws an additional load upon an already overburdened system thereby aggravating

the toxemia. From this point of view foci of infection should be cleaned up. Their removal, however, will not cure the thyroid disease, it will simply decrease a little the body's load. One must be careful that the procedures necessary to eradicate the infections are not such as to aggravate the hyperthyroidism.

An exophthalmic goiter can be made a colloid type with iodine but the change is only transient. How or why iodine works so is not known.

## CAMDEN COUNTY.

Grafton E. Day, M. D., Reporter.

The regular meeting of the Camden County Medical Society was held on Tuesday, May 11, at the City Dispensary, being called to order by President Elwell at 3 p. m.

Dr. Lester W. Wilson, Camden, was elected to membership.

A resolution was adopted instructing the secretary to inform our Assemblymen that we knew how they voted on medical bills and commended such as supported the profession's recommendations.

The matter of the proposed changes in the Trustees of the State Medical Society was discussed and a "member from each county" plan was thought most democratic, but no action was taken as probably any changes might be unconstitutional according to our Charter.

A resolution commending Dr. Reik and his work was adopted, as was also a resolution endorsing Dr. Paul M. McCray as a candidate for Third Vice-President of the State Society.

The Scientific Program then followed with a discussion of Gall-Bladder Disease.

Etiology was presented by W. J. Barrett. X-ray aids was presented by Dr. Joseph E. Roberts, who showed exceptional plates to illustrate his paper. Medical Aspects was presented by Dr. Thomas K. Lewis, who reviewed the medical attitude toward this disease. Discussion was opened by Dr. Paul M. McCray, who told of surgical aspects with illustrative cases. Dr. J. L. Mahaffey graphically depicted what happens after Gall-Bladder removal, showing how the ducts dilate and become more tortuous.

Drs. F. William Shafer and A. B. Davis took part in the discussion.

Dinner announcement followed the discussion and those present enjoyed a shad dinner, with the "fixins."

## ESSEX COUNTY.

Alfred Stahl, M. D., Reporter.

The Essex County Medical Society held its regular meeting Thursday, May 13, at the Academy of Medicine of Northern New Jersey, with Dr. Elmer G. Wherry presiding.

Hon. Park H. Davis, famous Princeton athlete and an authority on athletics, long time student of athletics and historian of the development and progress of athletics, was the speaker of the evening. Mr. Davis took as his topic, "All Newark at Play". He said that while exercise, walking, "setting up", etc., such as one usually takes by himself, is desirable, exercise obtained by the playing of games does more than just develop the body; it also develops the mental and moral faculties. The playing of games develops character, courage, mental alertness, fortitude and chivalry. He predicted that we soon would see all citizens, young and old, rich and poor, strong and feeble, engaged in outdoor games from which



benefit and pleasure as well as proper exercise will be derived.

The term of office of Dr. Wells P. Eagleton, Delegate to the A. M. A., has expired and it was unanimously decided that Dr. Eagleton's name should be presented by the Essex delegates to the State Society as a candidate to succeed himself.

Dr. David A. Kraker was elected as representative from Essex on the Nominating Committee of the State Society, with Dr. C. B. Griffiths as alternate.

The following were elected to membership in the county society: N. A. Antonius, 37 Bell St., Orange; Paul Aszody, 9 Pierce St., Newark; Emery Boker, 233 Littleton Ave., Newark; A. G. Chmelnik, 919 Bergen St., Newark; Walter T. Gutowski, 393 Myrtle Ave., Irvington; Francis Just, 235 Fairmount Ave., Newark; John A. Kenney, 134 West Kenney St., Newark; Jay Liebman, 190 Clinton Ave., Newark; H. J. Moss, 54 Eagle Rock Ave., West Orange; Royce Paddock, 1019 Broad St., Newark; Henry Reich, 765 High St., Newark; Francesco Renzulli, 228 South Seventh St., Newark; George G. Rogers, 796 S. Orange Ave., Newark; I. Henry Young, 757 Lyons Ave., Irvington.

The following members were selected as Annual Delegates to the State Society meeting in June: John H. Bradshaw, Angelo R. Bianchi, John V. Bissett, Michael J. Coffey, Harry N. Commando, Elbert A. Curtis, Max Danzis, Rosa Einhorn, Armin Fisher, William C. Fischer, Adolph Flachs, J. Irving Fort, Ernest Gennell, Samuel M. Goldstein, Clarence S. Janifer, Ernest A. May, Clement Morris, Elias Shayness, J. Thompson Stevens, Henry W. Thayer, William A. Wakely, Carl Herman Wintsch.

#### Orange Mountain Medical Society.

The 454th regular monthly meeting of the Orange Mountain Medical Society was held in the William Pierson Medical Library, Orange, N. J., May 21, 1926.

The meeting was called to order by the President, Dr. T. W. Harvey, Jr.

After the regular order of business was completed, Dr. Geo. S. Reitter, of East Orange, N. J., supplied the paper of the evening "The Radiation Treatment of the Non-Malignant Conditions", which was followed by a general discussion.

(This paper will be published in full late.)

#### GLOUCESTER COUNTY.

Henry B. Diverty, M. D., Reporter.

The regular monthly meeting of the Gloucester County Medical Society was held at 2:30 o'clock at the Hallowell School of Adjustment, Summer Avenue and Ventnor Parkway, Atlantic City. The members and their wives were guests of Dr. Madeline Hollowell.

The following were present: Dr. Hollinshed and wife, of Westville; Dr. Samuel Ashcraft and wife, of Mullica Hill; Dr. Chas. Fisher and wife, of Clayton; Dr. Mortimer Duffield and wife, of Glassboro; Dr. Ulmer and wife, of Gibbstown; Dr. Downs and wife, of Swedesboro; Dr. Buzby and wife, of Swedesboro, together with the following delegates: Dr. Richardson, of Camden County; Dr. Johnson, of Atlantic County, and Dr. Miller and wife, of Cumberland County.

A clinic was held by Dr. Hallowell which was very much enjoyed. This was followed by an elaborate luncheon, followed by adjournment.

#### HUDSON COUNTY

M. J. Marshak, M. D., Reporter.

The Hudson County Medical Society met at the Jersey City Hospital on May 14, with Dr. J. F. Londrigan presiding.

Dr. F. J. Quigley of Union City was elected the delegate to the State nominating committee.

On motion, the secretary was instructed to send a letter of thanks to each of the Hudson County delegation in the Assembly and to State Senator Simpson, for their support of legislation approved by the State Society, and for their opposition to inimical bills.

Dr. H. H. Brinkerhoff, retiring after 32 years of service as Treasurer, rendered his final report. This report was received and ordered spread in full on the minutes of the society. Dr. Brinkerhoff received a standing vote of thanks for his services, and on motion was made an active member of the society without payment of dues and will be the honorary guest of the society at its next annual dinner.

It was regularly moved, seconded and passed that the Hudson County Medical Society desire a change in the present Constitution of the State Society in regard to the make-up of the Board of Trustees. The Delegates to the State Society were uninstructed except that they support a change which will be for the best interests of the profession.

The Nominating Committee's report was accepted and the nominees elected by a unanimous vote.

President—Dr. William Freile. Vice-President—Dr. S. R. Woodruff. Secretary—Dr. Harry J. Perlberg. Treasurer—Dr. Donald Miner. Reporter—Dr. M. I. Marshak.

Censor for three years: Dr. Hugo Alexander (term to expire 1929).

Trustees for one year, 1926-27: Doctors Donald Miner, C. V. Niemeyer, Gordon K. Dickinson, B. S. Pollak and John Nevin.

Scientific work for one year, 1926-27: Doctors E. J. Luippold, A. E. Jaffin, Wallace W. Maver.

Welfare for three years—Term to expire 1929: Doctors Joseph Londrigan, Louis C. Lange and H. F. Tidwell.

Membership for one year, 1926-27: Doctors C. B. Kelley, Chairman; B. Kooperman, William N. Barbarito, R. L. Ballinger, David M. Marks, M. J. Meiss, Joseph Koppel, William Brooke, William G. Doran, C. P. Opdyke, H. V. Broesser, William Eckert, J. M. Kolb, J. J. O'Connor, M. Frank, A. Justin, George F. Sullivan, D. B. Street, Louis A. Pyle, T. F. Coughlin.

Audit for three years—term to expire 1929: Dr. J. M. Stein.

Publication for 3 years—term to expire 1929: Doctors G. Ginsberg, Paul Andrea, H. T. Van Deesten and A. S. Schulman.

Publicity for 3 years—term to expire 1929: Dr. Grant P. Curtis.

Permanent Delegates: Dr. Joseph F. Londrigan, to fill vacancy caused by resignation of Dr. J. Morgan Jones.

Dr. E. J. Luippold, to fill vacancy caused by death of Dr. William Perry Watson.

Annual Delegates to State Convention in June, 1926, as follows:

Doctors Daniel B. Street, Margaret Sullivan, Donald Miner, A. E. Jaffin, Earle Halligan, William Callery, Charles V. Niemeyer, John J. Pagliughi, Morris Frank, Ernest Thum, Maurice Shapiro, Thomas Coughlin, Hugo Alexander, George Ginsberg.

Dr. H. M. Niele gave the talk of the evening.

This was a reminiscential, rambling and amiable discourse covering his 45 years of active practice in the coal fields of Pennsylvania. The majority of the patients in the early years were Welsh and Irish, but in the later years consisted of a heterogenous group of Slavs of all nations and of diverse tongues. He described a number of the odd medical superstitions and practices which these people had brought with them from their homes and the difficulties attendant to attempting scientific methods in their treatment. He told many anecdotes of the "Molly Maguire" period and of later day associations. The talk was well received and highly enjoyed by the members, who extended Dr. Niele a standing vote of thanks.

#### MERCER COUNTY.

A. D. Hutchinson, M. D., Reporter.

The Society met in the Carteret Club, May 12, the president, Dr. Comfort, in the chair. The minutes of the preceeding meeting were read and approved.

Dr. Horace D. Bellis was nominated as a Permanent Delegate, to fill the vacancy caused by the death of Dr. Edward S. Hawke. Drs. D. L. Haggerty, Frank G. Scammell and Walter E. D'Arcy were recommended to the Nominating Committee as Nominees for Councilor. The request of Dr. William A. Clark that he be allowed to resign as Permanent Delegate was not granted.

Dr. Elmer Funk was then introduced and spoke on the subject, "The Diagnosis of Some of the Less Common Diseases of the Lung." Dr. Funk illustrated his lecture with lantern slides, and made his subject extremely interesting and instructive because the cases were well chosen and many points of diagnostic value emphasized. Dr. Funk lamented that diagnosis of cancer of the lung was very difficult clinically, but said that it can, however, be diagnosed early by x-rays and by bronchoscopic examination.

He stated that 6% of the cases sent in for tuberculosis were really of some other pulmonary pathology. The subject was most thoroughly discussed.

Dr. George A. Corio was regularly elected to membership.

#### MIDDLESEX COUNTY.

John H. Rowland, M. D., Reporter.

The monthly meeting of the County Medical Society was held at the Y. M. C. A. building, New Brunswick, April 21, at 4 p. m., with 25 members present.

After disposing of the routine business, the society listened to an interesting and instructive address by Dr. Richard A. Kern, of the University of Pennsylvania, on the subject of "The Causes of Failure in Treatment of Hay Fever." A lively general discussion followed.

#### Rutger's Medical Club.

John H. Rowland, M. D., Reporter.

A meeting of the Rutger's Medical Club was held Thursday May 20, at 8.30 p. m., at the home of Dr. H. C. Voorhees, of Highland Park. Both before and after the transaction of routine business, a musical entertainment was rendered by a seven-piece orchestra. The speaker of the evening was Dr. William Klein, of New Brunswick, who gave an interesting talk on "Physiotherapy". After full discussion of this topic, the members and

guests enjoyed a delightful collation. There were 35 members in attendance.

#### MONMOUTH COUNTY.

Daniel F. Featherston, M.D., Reporter.

The May meeting of the Monmouth County Medical Society was held at Berkley-Carteret Hotel in Asbury Park on May 26. Dr. James F. Ackerman, of Asbury Park, read a paper entitled "The Psychology of the Office Patient", and Dr. D. M. P. Magee, of Long Branch, read a paper "A Few Remarks on Pyelitis". These papers were followed by a general discussion.

Dr. W. H. Guillian, of Asbury Park, was elected to membership. A committee consisting of Drs. James A. Fisher, W. G. Herrman and Earl C. Wagner, all of Asbury Park, was appointed to arrange for the June meeting.

#### PASSAIC COUNTY.

Donald B. Low, M. D., Secretary.

The April meeting of the Passaic County Medical Society was held at the Health Center Building, Paterson, N. J., April, 1926, with 26 members and 1 guest present. Dr. Charles R. Mitchell presided. The minutes of the previous meeting were accepted as read, and the scientific program was then taken up.

Dr. Thomas Dingman presented a case of Stenosis of the Common Bile Duct; this was discussed by Drs. Maclay and Dingman.

Dr. J. V. Bergin read a very interesting paper on the Pitfalls of Pediatrics. A lengthy discussion, opened by Dr. Winters, followed.

Drs. Dingman, Mitchell and Bergin spoke of the life of Dr. Rush Neer, and the secretary read a resolution drawn up by Drs. Wm. Fliteroft, E. L. Henion and G. E. Tuers. This resolution was as follows:

Whereas, the Passaic County Medical Society has learned with sincere and profound regret of the death, at his late residence, of Doctor Rush Neer, who became a member of this society in 1881 and who had continued in practice in this city until his fatal illness.

Whereas, we recall with pleasure his cordiality, his modesty, his kindness of heart, rugged honesty of character, and his numerous other personal qualities, which endeared him to all; he has left no enemies and many friends, and his memory will long be retained by us as an honorable associate and a skillful physician.

Resolved, That while we bow submissively to the wisdom which is beyond our understanding, we deplore the death of our beloved and respected fellow member and we desire to express to his family our sincere sympathy in their great bereavement.

Resolved, That these resolutions be spread in full upon the minutes and a copy be sent to the family of the deceased.

The resignation of Dr. C. J. Kane as permanent Delegate was read to the society and accepted.

Dr. Ryan nominated Dr. H. Brevoort to succeed Dr. Kane. Voted upon and passed. The nomination of Dr. Brevoort left a vacancy in the list of annual delegates, and Dr. H. Gotchman was elected to fill this vacancy.

The May meeting of the society was held on the thirteenth, at the Health Center Building, Paterson, Dr. Charles R. Mitchell, presiding.

Dr. Feigenoff, of Paterson, presented an interesting case of "Cretinism."

Dr. Charles R. Mitchell presented a case of



"Granuloma Fungoides." At first, Dr. Mitchell stated, the condition described resembles an erythema or urticaria with patchy red spots distributed over the body, these become infiltrated and form tumor masses. These masses ulcerate, and the prognosis is very grave. This condition is somewhat analogous to lymphosarcoma of the skin. In considering the treatment he stated that an occasional dose of salvarsan and accompanying x-rays may cause the lesions to disappear. In the case presented the tumor masses had disappeared and the body was covered with scars.

We had the pleasure of having Dr. Reik, of the New Jersey State Journal, with us. He spoke of the recent bills which the chiropractors, naturopaths and osteopaths tried to put through the Assembly, and explained that no medical legislation was enacted this year.

The paper of the evening—"Popular Fallacies Concerning Hemorrhoids," given by Dr. J. F. Montague, of New York City, was very interesting. His talk was accompanied by 3 reels of motion pictures. He first explained the pathology of hemorrhoids, classifying them as internal and external, subdivided into simple and complicated. All these various types were shown in pictures, both grossly and microscopically. In the treatment of hemorrhoids, Dr. Montague mentioned 3 procedures: Excision and ligation, clamp and cautery with secure ligation, and the injection method. Of the 3 methods, he preferred the first. In speaking of the injection method, Dr. Montague recommended the use of orthocresol, instead of phenol, because of its nontoxicity. He also stated that the injection method should never be used in treating external hemorrhoids.

The society is going to give a dinner and outing, June 8, 1926, at the North Jersey Country Club. This dinner will be given in honor of the oldest living member, Dr. James M. Stewart, and will be known as the Dean's Dinner. We expect a large turnout and we feel a delightful time will be had by those who are able to be present.

Dr. L. Frank Cole, of Passaic, and Dr. Joseph N. Roy, of Paterson, were elected into membership.

Dr. Spickers asked coöperation in the campaign which is to be held for the Control of Cancer; he having been appointed by Dr. Ill, of Newark, to take charge of affairs in this district.

#### SALEM COUNTY.

William H. James, M. D., Reporter.

The annual social session of the Salem County Medical Society was held at the Country Club,

Thursday, May 20. At this meeting the members and invited guests enjoyed a planked shad dinner for which Salem County is famous. After the dinner Dr. C. L. Fleming, the President, called on Dr. Lucius F. Donohoe, President of the State Society, who spoke in a general way about the advantages of being a member of a county society, which causes a closer fellowship one with another to medical men, and invited us all to attend the State Meeting bringing our wives and sweethearts with us to enjoy a few days of pleasure at the seashore.

The next speaker was Dr. J. Bennett Morrison, of Newark, N. J., Recording Secretary of the State Medical Society, who spoke on several subjects pertaining to the financial condition of the Society. Dr. Morrison also urged every one to make an effort to attend the State Society meeting at Atlantic City.

Dr. Henry O. Reik, Editor of the State Journal, spoke of the increase in the size of the Journal and the interest, as a whole, that the physicians of the state are taking to make it a success. Dr. Reik also gave an exhaustive talk on "Periodic Health Examinations." Among other things he said that the examinations should be thorough and that the physician should receive adequate compensation for such work.

The "last but not the least" speaker was our own Dr. James Hunter, Jr., of Westville, N. J. Well, you all know what Dr. Hunter can do and what an efficient president of the State Society he made. He spoke of the advantages of the county societies having a social session and that Gloucester county was the first to adopt this plan. Dr. Hunter paid quite a compliment to the physician's wife and how she could assist him in his profession.

The delegates present from Cumberland County were Dr. W. P. Glendon of Bridgeton and W. E. Sharp of Port Morris.

Taking it all in all this was one of the best meetings that the society has ever enjoyed.

#### WARREN COUNTY.

L. Cook Osmun, M. D., Secretary.

At the last regular meeting of the county society, it was voted unanimously to favor the Morris County plan for reorganization of the Board of Trustees; that is, to recommend amending the Constitution of the State Society so as to provide for Board of Trustees to consist of the 7 elective officers and one member from each county. The opinion was expressed that such a change will make a more representative body and will stimulate the county organizations to greater interest in the State Society work.

#### HEALTH OFFICERS ASSOCIATION.

The last regular quarterly meeting of the New Jersey Health Officers Association was held in Newark, March 25, 1926, where the association members were guests of the Prudential Life Insurance Company. Arriving guests were greeted by Dr. Crankshaw and conducted on a tour of inspection of the building, and were shown particularly what this institution does in the way of providing healthy working conditions for its employees; the spacious, clean, well lighted and well ventilated work rooms; large, comfort-

able, quiet and well equipped rest rooms for the girls; the excellent cafeteria, with an appetizing menu, where luncheons are served and eaten under hygienic conditions; the cleanest and most sanitary of kitchens, bakeries and storage plants. After this inspection, luncheon was served to the visitors, and Mr. Hurrell, an officer of the company, delivered an appropriate address of welcome.

Then followed the fixed meeting of the association, at which the following papers were read and discussed:

## THE SIGNIFICANCE OF THE CARDIOVASCULAR RENAL DISEASES IN LIFE INSURANCE.

J. Allen Patton, M. D.

Medical Director, Prudential Insurance Company of America.

The United States Census Reports record as follows the number of deaths per 100,000 in the registration area from 1915 to 1922:

	1915	1916	1917	1918	1919	1920	1921	1922
Heart Disease	165.7	168.7	171.7	170.1	146.7	159.3	157.1	165.7
Cerebral								
Hemorrhages, etc.	85.2	86.9	88.1	84.6	82.2	86.4	85.1	87.7
Nephritis	105.1	105.6	107.9	97.6	88.1	89.4	85.4	88.5
Total	356.0	361.1	367.7	332.3	317.0	335.1	327.6	341.9

There were 154,495 deaths recorded as Diseases of the Heart in 1922, or 14% of the total deaths from all causes, as compared with 13.5% in 1921. Most people dying from heart disease have reached or passed middle life, hence the population age range must be kept in mind in a comparison of different places. Insurance companies must also remember that age has a bearing especially upon the expectation of their heart lesions cases. I shall make frequent reference to an article prepared last year for an insurance gathering.

The increasing frequency of the reports in the public press of sudden deaths from heart disease leads to these questions. Is heart disease really on the increase? Is the diagnosis being more correctly or definitely made? Or has it become the fashion to ascribe to the heart all sudden deaths not clearly known as being due to some other or-

gan or disease? The reports show that in the last 10 years heart disease has taken more lives than any other human affliction and that a child of 10 years is 3 times more likely to die eventually from heart disease than from tuberculosis.

The Prudential Insurance Company's Ordinary Mortality records show 1626 males died from heart disease in 1924, or 15.6% of the total male deaths. This rate has been approximately 15% for 1922, 1923 and 1924. This might be construed as opposed to an increasing death rate from heart disease, but it also might mean a better selection by the Company. Though the rate for women has been slightly lower than that for men, there are too many factors involved to claim that men are more liable to cardiac disease.

Our 1924 heart deaths by decades show the largest number in the fifties, followed by the sixties and then by the forties.

	Under 20	20-29	30-39	40-49	50-59	60-69	70 and over	Total
Number	14	64	175	301	500	412	158	1626
Percentage	0.86	4.06	10.76	18.51	30.75	25.35	9.71	100.0

Thus, companies insuring known cardiac cases must bear in mind the increased mortality after age 40 is attained.

The addition of our 948 deaths from kidney diseases to the 1626 from heart diseases in 1924 makes a total of 2573, or 24.7% of our total of 10,405 deaths of males with ordinary insurance.

Some years ago we made a study of our mortality on 5000 cases we had rejected but who had been previously insured with us. We divided the circulatory records into (1) heart murmurs; (2) heart diseases and (3) functional conditions. This subdivision was on rather broad or loose lines. Based upon the American Experience Mortality Table these showed that if insured at time of our refusal we would have had for the murmurs 244%, for the heart diseases 265%, and for the functional conditions 323% instead of the calculated 100%, and for the total exposure up to the date of the study it would have been 218%, 222% and 274% respectively. Thus, if careful examination had not eliminated these cases the Company would have experienced a heavy mortality in the group. Since that time the Company started to insure some of the cases in substandard groups, but our examinations are more searching and the rates charged these cases are increased sufficiently to cover the increased mortality we believe the group will give over the normal rate.

The good results of careful examinations are equally as well illustrated by a group of cases we have insured after finding no circulatory abnormality though one had previously been reported as present. We had 94% of the calculated 100% in 4183 such cases, with an average exposure of 5 years.

Life insurance medicine is essentially that of remote, but this must be based upon as complete a case history and physical examination as we can obtain and as good a diagnosis as we can

make from the reports received at the Home Office.

We feel that the condition of the myocardium is more important than the kind of murmur, the rate of the pulse, the blood pressure recorded, etc., or, as has been said, "the life, health and power of the heart muscle is the essential thing." Individual characteristics must be kept in mind. Does it take considerable or only moderate exertion to cause shortness of breath, palpitation, fatigue, giddiness, faintness, precordial pain, or distress, or a sense of pressure or tightness across the chest? Increasing symptoms of cardiac distress after exertion are indicative of progressive muscular weakness. The amount of exertion necessary to cause breathlessness is valuable in estimating the integrity of the heart muscle.

The etiology greatly modifies prognosis and we should not consider the valvular lesion separate from its cause if we can determine this.

Blood pressure readings are valuable, especially in older individuals with myocardial rather than valvular lesions. Constantly high readings, especially the diastolic, indicate the degree of constant cardiac muscular strain.

The life insurance home office doctor must act upon the case histories and examinations less complete than the clinician gets before he is called upon for a diagnosis, hence our action must be based upon our experience with groups or classes with similar findings and histories rather than upon individual cases.

During the month of October, 1924, we had 1556 ordinary rejections, with 525, or 33.74% of them due to abnormal circulatory conditions. We approved that same month, usually at an increased rating, 603 cases with some circulatory impairment present and 233 cases with a previous circulatory impairment history, but none found at our examination. Thus, out of 26,094 ap-



plications in October, 1924, we had 1361, or 5.2% with some circulatory impairment present or the history of one sometime previously.

We have a careful general physical examination, by an examiner we believe competent, after he has obtained the health and family history of our applicant. Should any reason appear we have the examiner forward a urine specimen for examination in our laboratory. The blood pressure is recorded and special attention is given to the pulse rate and character, the conditions of the arteries and veins, the location and size of the heart and the valvular sounds.

Thus we attempt to safeguard the Company's interests before placing a risk on our books, and thereafter through our Longevity Service with our thorough laboratory tests and the efforts to promote periodic examinations by our policyholders' personal physicians, and we feel that we are moderately successful in these endeavors.

### DEGENERATIVE DISEASES—HOW THEY MAY BE STUDIED AND CONTROLLED.

Dr. Haven Emerson,  
Professor of Public Health and Hygiene, Columbia University.

Terms keep us often from making progress in public health work and, at the time when "Zymotic Diseases" was the name used in all health reports to cover a multitude of infectious and communicable diseases, little progress was made in the intelligent study and control of these diseases. As long as we keep the term "common cold" in use, we are very unlikely to make any real progress against the study of the non-specific respiratory tract infections and their control. The term "Degenerative Diseases" should be put in the discard for precisely the same reason. Many of the diseases that are included in it are not degenerative. It is a term used formerly as a convenient handle to discuss diseases of a great variety in nature and origin with little in the way of real facts as a basis.

What I can offer today is simply a preliminary statement upon the subject, which, I trust, will interest you to begin on your own account similar studies in your own communities. What we speak of as epidemiology has in the past applied almost exclusively to the natural history of communicable diseases in relation to each other and in relation to certain common factors of age, sex, race, occupation or geographic distribution. There is no reason why precisely the same method should not be applied to other than communicable diseases and it is by that method that I studied the subject of diabetes, in New York City, 1866 to 1923. I have used the same approach in studying other diseases of the group which chiefly affect persons at the age of 45 or over and are generally included under the common term "degenerative diseases."

What appeared was the steady increase in the diabetes death rate, the increase being chiefly in persons over 45 years of age and selectively among the women. The analysis of the cause of this is too long to go into. You will find it in the Archives of Internal Medicine, of November 1924.

Then I took up chronic nephritis and Bright's disease and some of the diseases of the heart, and what I have to show you is a series of charts with preliminary results of my studies in this field. This is not a completed study. The excuse for putting it in this symposium is because every

one of the trails through which any one of these groups of diseases leads us, is directly back to the conclusion that progress in prevention will be made only in proportion to the application of a thorough annual medical examination.

Chart of the leading cause of death in New York City in 1924, (unfortunately, it gives you only 9 and leaves off the last group, diabetes, which would be tenth in order of causes of death in the city of New York): Heart diseases, pneumonia, cancer, tuberculosis, accidents and violence, cerebral hemorrhage and arteriosclerosis, congenital debility, Bright's disease and nephritis, typhoid and diarrhea. The death rate from diabetes has run somewhere between 23 and 25 per 100,000 for some years past, that is, one death from diabetes for every 4 of tuberculosis in New York City and steadily rising, as I will show you on a subsequent chart. (At this point Dr. Emerson exhibited his charts of death rate and actual deaths since 1900.)

We should study heart disease, as we would any of the other so-called degenerative diseases. You must divide heart diseases according to age and sex, and we have here a chart of the death rates by five-year age groups, males and females, for the 20 years for which we had an exact census enumeration of the age groups by population, 1910, 1915 and 1920. Now, if there was any progress being made, we should have a change in those 3 lines. They are essentially overlying. The differences between those 3 lines is not more than you would have in the ordinary variation in statistical practice. It is obvious that there is no striking change in the picture in the course of 10 years. You will notice that in these years in spite of the change in age groups of the population as a whole, you will find that there is no very great increase in the cardiac death rate for a specific age group. We know that our populations are showing a larger proportion of people over 45. Therefore, if we deal with the cardiac death rates in the population as a whole, we are doing a foolish thing. If we deal with the scarlet fever rate on the basis of the population as a whole when we have a smaller number of children in the population—we are rather dishonest if we brag about the reduction in scarlet fever. The population, which is showing a constantly reducing number of children per thousand of population is likely automatically to have a reduction in the diphtheria and scarlet fever death rates. A population that has on the average 2 or 3 children per family instead of 5 or 6 will probably show a reduction in the death rates from scarlet fever and diphtheria.

In spite of the tremendous mounting of the death rate of heart disease for the whole population, there seems to be little if any essential specific increase in the cardiac death rate in any of the age groups.

You see that the diabetes death rate has increased from 1.5 per 100,000 up to 22.5. It went up to 25, dropped a little bit during the period of the introduction of insulin, 1922-1923, and has now started up again, the insulin perhaps delaying the time of the death but not materially reducing the number of deaths from diabetes.

I may say that the increase in diabetes death rate appears to be in part at least the result of excessive consumption of food and insufficient physical activity. Diabetes is an expression, in a way, of the disproportion between unnecessary carbohydrate energy taken in and the insufficient expenditure with the large muscles of your back and trunk and legs. The death rate among

agricultural employees is about 6 and that among doctors and lawyers and other people who do not do so much physical exercise is nearer 30, and the rate varies, of course, in a general mixed population according to the age group.

Now just bear in mind that diabetes is one of the diseases that we have included among degenerative diseases. Diabetes is certainly going up. Now let's see if all the others are doing the same thing and to what extent. Here is a study of acute and chronic nephritis in New York City from 1900 to 1925. We have made a study by age, sex and year, and, in certain years, by the season of the year, from 1866 on, but since 1900 there has been no very striking difference in clinical practice so far as diagnosis and classification of arterial disease, renal disease and heart disease are concerned. Prior to 1900 we went through a pretty rapid series of changes in clinical terminology. How can you honestly put chronic nephritis and Bright's disease in the same group with diabetes when they are behaving in such a radically opposite manner. I think your impression has been that chronic nephritis was increasing. The general death rate from chronic nephritis for the city of New York per 100,000 of population in 20 years has fallen from a rate of 161 to a rate of 67, and during that time the average age of the people has increased. Now, look at the death rate of acute nephritis. It has fallen from 21 to 2 per 100,000 population. This solid line is the percentage of all deaths due to both acute and chronic nephritis, which has fallen about in proportion with the fall of the general death rate. There isn't any very radical drop or change in the percentage of nephritis deaths in proportion to all deaths.

To analyze this further, we studied chronic nephritis deaths by age groups, among persons under 20 years of age, between 20 and 44, and 45 and over, and you will see in chronic nephritis that for all the people of 45 and over it tends a little bit to rise, but for persons between 20 and 44 it has shown a decided falling off. (This is on semilogarithmic paper, and shows a true ratio of change from year to year) and also for those of 20 years and under. If you will divide acute nephritis in the same way according to age groups, you will see that there has been a notable reduction in each age group.

This chart gives the rates of several of the so-called degenerative diseases in New York City for the last 25 years.

The rate for heart diseases has been rising. Now that for nephritis has been going down. That for cancer has been going up. That for diabetes has been going up, from 10 to 22 in this period. That for cirrhosis of the liver has fallen from 22 down to 5 per 100,000 in this same period. It would be just as consistent for us to put tuberculosis, typhoid fever, whooping cough and measles all in one class and say acute infections as to put these chronic diseases together and call them degenerative diseases. We shall make little progress if we think of them and study them as one group.

The study of cirrhosis of the liver is a most interesting problem. There have been fluctuations from time to time, but something occurred perhaps 5 years or more prior to 1911 which determined a change in the cirrhosis disease death rate. Certain things happened during the war which radically altered the diabetes death rate. Things happened in the influenza epidemic which affected the nephritis and cardiac death rates. The cancer death rate goes along without apparently being influenced by any similar episode.

That is the stage of my study and it will be,

as you will see, some time before it will be completed. We shall want to compare them with English experience. We shall want to compare our New York City experience with that of the United States registration area and in various ways make sure of our observations in these chronic diseases of the later decades of life just as we would with the acute communicable disease which we are more accustomed to analyze by sex and age groups, by area of residence, by season of the year and by occupation.

In the future when you are thinking of these so-called degenerative diseases, analyze them with the same conscientious thoroughness that you apply to that handful of cases of typhoid fever, which gets a thousand times more attention, in proportion to its importance, than heart disease does. I think you recognize that whether we are dealing with diabetes, cancer, chronic nephritis, heart disease or cirrhosis of the liver progress in control begins with the moment when a skilled physician distinguishes between perfect health and a slight variation from normality. The periodic health examination is the point of departure for improvement and prevention just exactly as in tuberculosis the point of departure for control is the time when the earliest incipient indications of invasion of the disease are appreciable, or as your control of typhoid begins with the presumptive diagnosis of a suspicious case of unexplained temperature with abdominal symptoms. So with these diseases, our only recourse is to be, not through specific interference or modification of environment, not by compulsory this or that, but by the process of education of persons, partly through life insurance channels, through the visiting nurses, but chiefly and permanently through the practicing physicians, that the course of all these diseases can be modified and possibly to the point of arrest only when the earliest possible symptoms are seized upon by the physicians as a point of therapeutic attack.

When we have found by these statistical analyses by age and sex, occupation, season, etc., what are some of the contributory epidemiologic factors, we may perhaps be able to contribute quite as much as the clinicians and as the pathologists have been able to in the field of nephritis.

#### **METHODS OF SECURING EFFECTIVE CO-OPERATION AND PRACTICAL RESULTS IN THE CAMPAIGN FOR PERIODIC HEALTH EXAMINATIONS.**

Alec N. Thomson, M. D.,

Secretary Committee on the Public Health, Medical Society, County of Kings, Brooklyn, N. Y.

In the first place may I take a bit of speaker's license and depart somewhat from the idea conveyed by the title. I am not sure that I am long on methods that will produce either effective co-operation or practical results. I do believe that there are principles that can be applied to health work on a basis of participation that will bring together the important elements of the population that are or should be interested in health promotion. Most of these principles are simple and apply to education generally.

First, let me tell you briefly what we did in Brooklyn—Kings County: In December, 1922, the subject of health examinations was first discussed by our Committee on Public Health. That Committee is composed of regular doctors who represent the various facets of medicine as it is practiced in the present day—public and private, general and special, and in all branches.



In April, 1923, preliminary open discussion was started before the society by devoting the monthly meeting to the subject.

During 1924, the special emphasis began: In March, the first leaflet was sent to all physicians; the examinations of 91 of our own members began; a clinical lecture was given with a demonstration of the technical procedure.

In April, the stated meeting of the society was devoted to health valuation—in relation to philanthropy, to business, to industry, to the church, to the profession, in short to the community.

In May, examination blanks were sent to all physicians in the Borough by the Brooklyn Health Examination Committee.

In June, a letter and reprint on the types of physical examinations was sent out.

In July, the report of finding was issued and published in 2 medical journals in September.

In September, a leaflet on the relationship of gonorrhea and syphilis to the periodic medical examination was sent out to all physicians.

In November, a leaflet was issued reminding the profession that cancer control was predicated on the "health examination idea".

During 1925, less intensive work was done. The subject has not been allowed to lapse, however. The public health committee had been postponing the publication of its report until the American Medical Association Manual was off the press and in the hands of the society membership. This became an accomplished fact in November, 1925.

During 1926, continued action is to be carried on. In January a leaflet on social hygiene in relation to the health examination was distributed. The Report of the Committee was issued in February. It is a description of our procedure and includes the reproduction of the printed material used in our work.

The publication of leaflets on tuberculosis and heart disease from the periodic medical examination point of view are planned for at the present moment and we hope for the continuation of the same idea, if and when funds permit, in relation to the many subjects included in the field of preclinical medicine, such as diabetes, nephritis, blood pressure, temperature, overweight and underweight, child health and the like—in short, a "by mail" program designed to stimulate continuous medical training, using the health examination idea as the peg on which to hang modern medicine for the medical man in actual practice.

The actual cost to the society has not been much in money but a great deal in time and effort on the part of many individual members. In dollars the whole affair has cost thousands. These dollars, in large part, have been contributed by agencies interested in the community's health, willingly and without restriction, on a basis of joint participation in the field of community health, which is a much saner procedure than the usual coöperative affair wherein the medical profession "endorses" the activity of some program by signing on the dotted line following the words "approved by".

Secondly, let me tell you why we did it. Those of us who happened to be in touch with the National Health Council felt in our medical souls that the health promotion enthusiasts were a bit too impulsive, and tried to apply the brakes. No movement calling for action in reasonable concert by the medical profession can be much more than a commotion unless organized medicine is ready. The American Medical Association had to move—to be moved, if you prefer. Until motion in the medical field has become an accomplished fact,

action by health promoters is not going to accomplish much. I think that is something that folks in official and unofficial health agencies overlook.

In various ways, some vocal, a few political, or maybe diplomatic, and by others that were plain hard work, medical motion became an accomplishment—and speed reduction on the part of the lay health enthusiasts was, in part, brought about. We almost slipped up here because of the unorganized state of the organized medical profession—administratively speaking. American Medical Association, State and County Societies were in about the same class as for as the handicap of no funds, no personnel and other hindrances to administrative machinery, were concerned.

How did we overcome the obstacles in Kings? First, we blocked—frankly and openly. We said that the profession not being 100% dumbbells would show an interest if the message came to the profession from the profession. It sounded reasonable to suggest, therefore, that the money to be spent might bring in a return—dollar for dollar—far greater if it were spent first on the doctors.

Some agencies saw our point of view; one said it would hold off a few months before telling the waiting section of the world called Brooklyn; another, that it would participate in examining doctors; others, that they would like to tell their story as it related to the subject in doctors words over the imprint of the doctors organization; and, one said it would assist in paying for the preparation of a report. The sequence, I gave in the beginning, is the result.

Has it paid? I'll say it has. Has it produced statistics? It has not! You can, of course, say that so many doctors have been examined, lectured to, sent about so many pieces of printed material and a lot of other more or less meaningless figures. You cannot say that so many men, women and children of so many colors and so many nationalities and so many grades in the social scale have been done this to and that by. Most of such figures would be valueless.

What we can say without bunk is; that doctors have had their alibis taken from them by doctors; that it is no longer good form to tell a patient to wait until sick before calling for medical service; that physicians are making examinations for other reasons than "present complaint" and "presenting symptom"; that eyes have been opened—lay and medical; that either doctor or client is in a position to request or urge a physical examination for a minor ill or no ill at all. What else are we after—may I ask?

Is preaching out of order? It not, then I'd say to health workers, official and unofficial, quit kidding yourselves that doctors are your opposers and wake up to two facts. One is to apply your own oft-repeated slogan—the practicing physician is the ultimate health officer. Do as you do with your own staffs; you give them material to work with and before you do that you explain how to work with it. Do the same thing with your ultimate health officer; but do it through his own outfit, his medical society.

The other is that the ultimate health officers organization—the medical society—is not a smooth running, well-gearred administrative machine. Neither was yours so many years ago! All right then; offer your organization of doctors administrative machinery and do it square across the table with all cards exposed and no strings attached. Loan them clerical service, print their stuff (not yours), help them do the job on a fifty-fifty basis. Do it in exchange for their time,

their effort, their brain power—and then watch health work make headway. If it costs a dollar to you, you'll get the surprise of your life when you count up the dollars of service you get from the ultimate health officer.

Please don't misunderstand me. I do not mean free health examinations—the examinee pays for that. A health examination is in the nature of insurance and the insured pays. Your business is selling health, your salesman is the individual physician. You must support your sales force and not call them names.

Doctors are mostly conservative radicals, and if you will call them early and often you will find their conservatism will save you some mistakes. You will also find they will rush you off your feet, once the problem is solved. Is it not so with the good surgeon; conservative to the time of decision, and then alert, keen, full of action. Try it out and you will see. If you have the personality, the willingness to participate, the ability to keep a stiff pace and the facilities with which to carry on, you will get action from the medical profession. Some say you will get more action than the professional health worker wants. I don't believe that any more than I believe that doctors are obstructionists in health work. I've been in both camps. Now I am in a position "betwixt and between". There are some bad eggs on both sides, and a few of them are going to get broken. Both the medical men and the health men are in the main real men.

The obtaining of practical results and effective cooperation in a campaign is not a question of fan-fare, of credit, of commotion. Analysis of all the factors, quiet application of the simple rule of give and take, attention to logical channels, recognition of the general good that is in most of us and the use of plenty of time will do the trick. In brief, don't be complicated, don't be theoretic, don't expect to be complimented—and above all don't be a report hound!

#### DISCUSSION.

Dr. Craster: The diseases of middle and advanced life are being classified by many persons as those of a preventable type and therefore of a concern to health workers. Now, we are going to take Dr. Emerson's views and go after these various ailments. I don't know, though, what very old men are going to die from, or poor old women for that matter, if they are not going to be allowed to end with Bright's disease, organic heart disease or nephritis. I feel that in studying diseases of advanced life, we are covering a field of biologic fact which is clear to any physician who has been able to observe all forms of degeneration as age advances. Changes occur in most body tissues. Age is manifested not by a falling to pieces like the old shay, that was so well made that it couldn't fail in any one part but broke up completely at the end, but by separate failures to function. Arteriosclerosis is one of the most common things that appear as age advances.

In discussing such a thing as arteriosclerosis, Dr. Osler says that it is an evolution. Is it a normal process that goes on in all tissues as age advances? Osler says that it is, and forms the natural expression of the wear and tear in which the heart as well as other organs of the body are worn out by a process of decay. It depends on the quality of the vital rubber, which is the arterial wall; some people being blessed or not blessed with a good quality of rubber to begin with, so that changes of senile decay occur very early in life. There are, thus men who are old

at the age of 30 years, and others who are young at 70. So I think we must be careful in studying these diseases that we do not come away with the idea that we are going to eliminate the so-called diseases of circulation.

I believe that what we all have in mind is not to try and stop a decay which is natural with all lives, but to stop unnatural speed in something that has got to come sooner or later.

Then there has been particularly emphasized this afternoon by Dr. Emerson in the charts which showed, a decrease in cirrhosis of the liver. We have locally also observed the same in apoplexy and Bright's disease and feel that this decrease is due to improved methods of living. Such changes as arteriosclerosis, Bright's disease and cirrhosis of the liver can be much delayed, or even arrested, if the individual will listen to medical advice and adopt simple rules of good hygiene. Rapid degeneration is fostered in middle life by wrong methods of living, of which the most important, I think, is over-eating. Over-indulgence in rich foods encourages all these changes long before they are actually due as a result of old age. I feel, with Dr. Emerson, that diseases of middle life should be studied, progressively and sensibly, for the purpose of determining how far they are to be controlled.

As regards organic heart disease, I had the pleasure of writing an article on this subject for the American Journal of Public Health, and even a cursory glance into the literature upon this subject showed how very little we really knew about it, especially as to the reason for its increasing death rate. What is causing organic heart disease to be the principal cause of death? If you go back to technical books on medicine, you will find that heart disease is described as one of the commonest results of a rheumatic infection. If you attend clinics or hospitals today, however, you will find that rheumatism and rheumatic fever, as we knew it years ago, has become quite a rare disease. The old type of rheumatic fever which Dr. Emerson saw, the same as I did, the type of acute condition of polyarthritis with fever, extreme prostration and anemia; this is not so common at the present time. I think that under the head of organic heart disease, there are concealed deaths due to changes in the arteries or arteriosclerosis. Unfortunately for correct statistics, when a person dies suddenly, the first thing the doctor thinks of as easy to defend in the certificate is organic heart disease, and yet I am sure that of these cases, there are not half of them that would be found, upon autopsy, to have resulted from this cause.

With regard to cancer, Dr. Emerson has said we are having an increasing death rate from cancer. I don't know whether it is considered scientific to go back to the old theory that we are perhaps now saving more people; there are more people reaching the cancer age than formerly so that our extra span of life is bringing a greater number of people to the ages of 50, 60 and 70 than formerly was possible and there are more possibilities of cancer in accordance with the new distribution of the population.

I think the papers and the talk we have heard this afternoon have been interesting and stimulating. If we are active in efforts devoted to the control of undue acceleration of our middle-age diseases, we will do something in public health which will be as valuable as the control of epidemic diseases.

(See July Journal for balance of Discussion.)



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## PRESIDENTIAL ADDRESS.

LUCIUS F. DONOHUE, M.D.,

Bayonne, N. J.

(Delivered at the 160th Annual Convention of the Medical Society of New Jersey, at Atlantic City, June 17, 1926.)

Fellow members of the Medical Society of New Jersey: It is a unique position that I occupy this evening, that of delivering a second Presidential Address to this organization, and I would have you know that the unusual honor is fully appreciated. Indeed, I am deeply mindful of the great honor you have done me and equally grateful for the trust and confidence reposed in me by you, my professional associates. Calling upon me to serve for nearly a full term as Acting President in place of your chosen leader, Dr. Mercer, you were, on its completion, kind enough to elect me to a full presidential term of my own; thus keeping me in an exalted position for nearly two years. Appreciating that great distinction to the full, I would, however, have you understand that I have likewise appreciated the accompanying opportunities, responsibilities and obligations of this office.

Now, having been given the opportunity for such long and intimate contact with the work and the workers of this organization, and wishing to pass on to you whatever benefits may have been derived from this association and study, it occurs to me that I may best recompense you by availing myself of a priv-

ilege and acquitting an obligation by devoting my Presidential Address to a review of the labors and accomplishments of this society, during the past two years and presenting for your consideration some recommendations as to the future conduct of your society affairs. I will take for my theme in this address the problems, outlook and requirements of the State Medical Society as I see them from the Presidential Chair. If, in the course of my remarks, either as reporting things done in the past or questions now confronting us, my opinions seem to be expressed rather emphatically, you will please not treat these thoughts as constituting a sermon, but consider them rather as earnest and honest expressions of feeling, growing out of a sense of duty.

I do believe that it is the duty of your President to acquaint you, officially with some of the problems with which we have had to deal and to direct your attention to the necessity for clear thinking and wise action in the effort to solve present day problems.

Two prime requisites for effective organization work are, harmony among those composing the society and a definite program for which to work. Without a definite purpose, a fixed objective, there must be a tremendous waste of effort. Without harmonious united action in support of a predetermined program, there is little reason to expect success. With this end in view, we have endeavored to get all the component societies interested in the larger features of the State Society work, and your Executive Secretary, your Recording Secretary and your President have visited every

County Society at least once during my term of office. Of course, it has been very agreeable to participate in the social features of these meetings, but it has been even more pleasing to note that our visits seemed to stimulate greater interest in the problems of the State Society, which means, after all, the problems of the profession, and to promote a spirit of fellowship and of unity among the local men. That the activities of the county societies have been much enhanced in recent years, is clearly evidenced in the ever increasing number of excellent reports appearing in our Journal. Most of the smaller counties have increased the number of meetings held during the year and this increasing frequency of conference has in itself, produced greater interest in medical affairs, scientific and economic, and greater activity in helping to solve the attendant problems in each field.

It is with much pleasure and satisfaction we note that the membership of the society has increased, despite the fact that at the last meeting the House of Delegates found it necessary to increase the annual dues; which demonstrates that our members are willing to contribute liberally to support an active program. Organization must ever be the watchword of your Executive and this leads us to insist on the importance of county medical society meetings. If the county medical society meetings are not well attended, there can be no thorough organization. The importance of a live secretary in your county society cannot be too strongly urged. A very active and progressive man should be chosen for the office of secretary and all should stand behind him. I would recommend that a meeting of all the secretaries of the county societies should be held once or twice annually and let us hope that at this meeting, a plan of campaign for better county meetings will be initiated and tentative arrangements made for the carrying out of the program. The traveling expense incurred by them should be a state or county society charge.

The members of the smaller county societies must learn the lesson of coöperation that can only come through attendance at the county meetings. The county medical society is the best antidote for jealousy and piracy in

our profession and for the prevention of destructive criticism. One would scarcely repeat harsh gossip or attempt unethical practice with his colleagues especially when he expects to meet them at a society gathering or dinner in the near future. He will not do this because of the disagreeable effect that will react on himself, by the knowledge of your presence at the meeting. Often a few minutes conversation will eradicate the misunderstandings. It is absolutely essential that we have full attendance at our county medical meetings, in order to formulate a program to be used in educating the laity in our own locality as to our ideals and aims. The value of harmonized effort is known to us all. The complaints we sometimes hear of a growing reluctance of the people to place full confidence in the medical profession as a whole, and of a growing habit of faith in all sorts of "pathies" is not well founded. But to whatever extent there is cause for such feeling, we believe the condition may be charged against ourselves for not spreading abroad among our neighbors a better knowledge of what the profession is doing to improve the general health of the community. Individually, the members of no other profession wield so much influence, but collectively, we are often powerless. The reason for the latter condition is found in lack of society unity.

In this connection, we would also call attention to the better spirit existing between the state medical society and the several state boards that have to do with medical affairs. Especially would be commend the coöperative spirit and the animation of the State Board of Medical Examiners which has, during the past two years, shown strong evidence of a desire to work along with us in the interest of better medical education and for the protection of the community against false prophets of medicine. The successful prosecution of more than 100 illegal practitioners within the past year would seem to show that the control of quacks may be effected to a considerable extent, by the simple enforcement of existing law, and we have called upon the board to perform its full duty in that respect. No other state has been so successful in the administration of the law. Jersey Justice has



come to stand for strict interpretation of the law, and the profession and the layman may well be proud of the record of our own state. The State Board of Health, speaking through its progressive and competent Director, has also aided, in every way possible, the development of our projects.

In November last, as the result of an idea that originated with our far-sighted Executive Secretary, an Interstate Conference was arranged between the officers of the Medical Societies of New York, Pennsylvania, and New Jersey. This idea of a tristate conference grew out of the conception, that while the medical problems of the three states were identical in character, the attempted methods of solution were variable and the state laws were in some instances seriously conflicting, and it was hoped that united action might revise conditions, improve and hasten development of programs, and prevent future conflicts. We anticipate that much good may result in future years from combined action of the physicians throughout the large territory embraced in these three states.

A little more than a year ago, the society engaged the services of an Editor for the Journal and a full time secretarial officer. We may congratulate ourselves that in this selection, we have combined in the office of the secretary and editor, a man who traveling throughout the state acts as a visiting hygienist and who in a manner, personally important to them, brings to the laity through the Rotary and Kiwanis clubs and other lay organizations of the state, the gospel of health. We all know the necessity of having some one to inspect and call to our attention all inimical legislation and again we are fortunate in finding in the person of our versatile executive secretary, one who takes up many such burdens and one who with all, through the editorship of the Journal does much to consolidate the society. Dr. Reik has always been ready and willing to follow the instructions of the Executive, the Welfare Committee and your officers, and the report of his work speaks for itself.

You have observed the rapid growth of the Journal, doubling its size within the past year, and must have noted its gradual development

in other ways. Every member of this Society should be interested in its further development and should contribute toward that progress in every way possible. First, by offering your scientific papers to your own journal for publication and thus calling specific attention to the amount of good work being done by members of the profession in this state. Second, by supplying the Journal with good reports of the organization proceedings.

The Welfare Committee work of the recent past has been beset by some unfortunate complications, but despite personal differences of opinion as to measures to be considered and methods of procedure, the committee has completed its year's work, and I heartily commend its report to your favorable consideration. In the first place, the Welfare Committee has finally established itself as a truly representative body, on which every county society in the state is being represented, and every man being free to speak for himself and for his county; and this true representation has done much to establish democracy at the meetings of the committee. It is difficult for anyone who has not been in very close touch with the committee work to appreciate the full import of what has been done.

It is true that the "Doctor's Title" bill was not passed but, we knew in advance, from past legislative experience, that the enactment of desirable medical legislation this year was highly improbable, which further emphasizes the fact that constructive educational work must be done outside of legislative sessions. However, the committee did succeed in preventing the passage of some very obnoxious legislation that was proposed by the Osteopaths, Chiropractors, and Naturopaths. The failure of these bills to pass, gives evidence of creditable work on the part of the Welfare Committee.

Now, let us for a moment consider present conditions and look into the future, with a view to determining upon a wise course of action.

First, and foremost, I would place the problem of securing a permanent home for our State Society, a headquarters from which we might conduct the ever-increasing work of the organization, and possibly a place where

we might hold our meetings. It should go without saying, that the oldest medical society in the nation ought to have a definite headquarters, and it is indeed a pity that such a home has not been acquired before the organization reached its present age of maturity, its one-hundred and sixtieth birthday. Within very recent years, the Pennsylvania Society has established headquarters at Harrisburg, the New York State Society enjoys certain privileges at the New York Academy of Medicine, and several of the younger western states, have, I believe, constructed homes of modest character. Massachusetts is now discussing the question and considering plans for securing a permanent home.

The New Jersey State Society has been a leader among the State organizations. She has always played a prominent rôle in the national medical organization; she was among the early advocates of legislation governing the practice of medicine; she has been foremost in procuring public health and social legislation for the benefit and advancement of the citizens of this state; she is today showing greater activity in the promotion of public education in medical matters than any other state in the union of comparable size, if not indeed of any size. There are many reasons why this society should have a permanent headquarters. First, by virtue of antedating all other state societies in organization it is in a sense the leading medical society of the nation and as such it is the sole authoritative medical spokesman for the state, and has always filled the rôle of leadership in medical matters. Second, it does not hold today very much tangible property, but it is acquiring some and would undoubtedly secure more if it were prepared to receive it; gifts and endowment bequests always follow the acquisition of such a home foundation. Third, its Journal should have publication offices with suitable space for preservation of a working library and for conservation of manuscripts and other important papers. Fourth, the society needs a suitable hall for its meetings, for the reception of other organizations and for the dissemination of educational matter through public lectures. It also needs small meeting rooms for the accommodation of its

committees, not only the trustees and the welfare committees, but other standing and temporary committees that would function better if they could hold their sessions at a place where records and clerical assistance would be available. The change in the office of Secretary finds our records scattered or missing. Our Editor, cut off by death in the midst of active health, leaves no continuous working records. Opportunities to secure and preserve priceless records are thus lost.

The foregoing shows the urgent necessity of providing for the housing of all our activities in one center. I would like to see this society, through its House of Delegates, take some definite action, looking toward the procurement of such a home. A start might be made by adoption of a resolution expressing our intention to establish such a home, and then by appointing a special committee to carry out the purpose of the resolution.

The second matter of greatest importance for consideration has to do with the determination of a specific policy for the society to follow, and this question of policy may be discussed under two headings; our policy in relation to public education in medical matters, and our policy in regard to legislative affairs. Regarding the first of the relationships, we have already expressed approval of the program that is being evolved. That program has dealt so far primarily with the subject of preventive medicine and has to do with educating the public concerning its own protection against the ravages of disease. I would like to see that program expand in the future in such manner as to make the people understand their proper relationship to the medical profession. It is all right to continue the handing out of life-saving, health-giving knowledge. That is in large measure our duty and we cheerfully render such service. But the public should give some evidence of its appreciation of the benefits conferred, and should bear its proportion of the cost of this education by voluntary contributions. We say this, not with any idea of placing such public instruction upon a commercial basis, but simply because we believe that the people are more apt to appreciate most highly those things for which they pay.



In the matter of legislation bearing upon the practice of medicine, we think it advisable to consider a definite program, in so far as that is possible. There are certain public health measures to which we should unquestionably lend support, and we may do this not only by helping to instruct the public concerning these questions but by actively aiding the State Board of Health and other agencies in their efforts to procure passage of such bills. This applies for example to the efforts being made to prevent and control infectious diseases like small-pox, diphtheria, and scarlet fever. Just as unquestionably, we must be ready at all times to meet the onslaught of the cults when they seek legislative endorsement of their presumptions. We may expect that our labor in behalf of worthy welfare measures and in opposition to those measures that menace the public health will occupy a considerable amount of our attention during the next few years.

As to attempts to amend the existing medical practice act, even with reference to those points wherein it may be considered somewhat weak, I believe we should move with caution and precision. For three successive years, we have attempted to secure adoption of the so-called "Doctor's Title" bill, and it is possible that the question may again be raised whether we shall continue annually to seek passage of that or some similar bill. At the present time this bill is not popular either within the profession or with the public. I am speaking advisedly when I say that the "Doctor's Title" bill is not popular with the profession throughout this state. It does not matter why this is so. It does not matter whether that feeling is because many physicians do not understand the bill or do not appreciate existing conditions. It only concerns the fact that the vast majority of our members take little or no interest in it. As for the attitude of the public toward the proposition, the people have undoubtedly misunderstood our object. We know, of course, that "protecting the Doctor's title" meant to most of us protection of the public against the abuses of that title, but the public has mistaken the term to mean that the profession selfishly desires some protection in the use of

the title. Before legislation on any question is sought, we should make sure that at least a majority of our own members desire those laws and are willing to bring active support to our efforts at procuring them, by keeping up a united front and by doing missionary work with their local representatives. That the existing medical practice act might be improved in several respects is probably true. Much expense has been incurred during the past few years for legal services in drafting amendments to the medical practice act, but up to date there is very little evidence of progress. Might it not be well now to consider the principles set forth in the so-called "Kelly Plan"; a plan which requires every one who desires to practice medicine in any way to present credentials as to general education and fundamental medical education, and then permits each licensed practitioner to determine his own policy as to therapy.

We should commence the campaign with presentation of the question to the county societies, so as to secure a perfect understanding and full coöperation on the part of all physicians in the state. We should then carry on an educational program with the public to show the people the need for safeguarding their own interests by requiring proper qualifications of those who would practice the healing art and by preventing the licensing of persons who are not properly qualified to enter that field. By that means the profession and the public will be prepared for action and brought to a point where they will unite in an effort to improve present conditions. If we keep our campaign on the high plane of public service and adhere to the fact that such legislation as we seek is for the public benefit and not for our personal gain, we can trust the people to secure enactment of the laws necessary to protect their own interests.

In conclusion, let me recommend unselfish, careful and conscientious consideration of all these problems. Let us carefully decide what our goal is to be and then move forward with deliberation and determination. Let me emphasize what I said in the beginning, that our success is to be determined by having a fixed purpose and by bending every legitimate effort to the attainment of that mark. Let us

get together, shoulder to shoulder, a group of all the regular practitioners of our great state, united for the purpose of advancing public health, relieving suffering, and protecting the public from mal-treatment by un-qualified practitioners.

I take this opportunity to thank you my fellow officers and all the members for the universal good fellowship, respect, and spirit of cordiality accorded me under all circumstances. Particularly do I wish to express my appreciation of all that our Recording Secretary, Doctor Morrison, has done to keep up our membership, and promote the interest of our society. The success of our organization depends in large measure upon the efficiency of its secretary, and it is my pleasure to assure you that we may well felicitate ourselves on having elected to that position a man so competent, so vitally interested and so devoted at all times to the work of his office.

Gentlemen, your coöperation, personally and collectively, during my term of office, as President shall be a beacon to illuminate my memory, as one of the brightest and happiest periods of my life.

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### **SYPHILIS AN IMPORTANT CAUSE OF DELAYED RESOLUTION IN ACUTE PNEUMONIA.**

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It is not generally realized that preëxisting syphilis, in a patient with acute lobar or bronchopneumonia, may cause a serious postpneumonic pulmonary complication, characterized by persistent septic fever and persistent failure of resolution. When acute pneumonia is prolonged beyond the period of its normal course and evidence of continued pulmonary damage remains, the physician begins to search for pleural effusion, empyema, lung abscess, or possibly an underlying tuberculosis. But not many think to look for latent syphilis in such a situation.

Text-book and system articles dealing with acute pneumonia are silent regarding syphilis as a cause of delayed resolution. There are, to be sure, many chapters concerning "syphilis of the lung" in the literature. Furthermore, under the much neglected caption of "chronic interstitial pneumonia," most authors list syphilis along with alcoholism, senility, and general debility, as possible etiologic factors. We believe, however, that syphilis should be "on file" not only in this somewhat dusty pigeon-hole of chronic pulmonary disease but also in the active emergency list of the acute pneumonias.

We propose to show, by case report and review of the literature: (1) that syphilis is an important cause of one form of delayed resolution of acute pneumonia; (2) that this complication is more frequent than generally recognized; (3) that early recognition and prompt treatment of this complication is productive of striking results, not only in the happy termination of a serious emergency but also in the prevention of subsequent chronic pulmonary disease.

In a recent article<sup>1</sup>, Fitz-Hugh reported 3 cases illustrating this thesis and reviewed the literature. Before this report there were 2 others, Head and Seabloom<sup>1</sup>, describing 3 cases, and Simonton<sup>3</sup> 3 cases. The following is the tenth case report exemplifying the subject under consideration.

*Case Report:* Mr. C., a native white American, resident of New Jersey, farmer by occupation, 52 years of age, became acutely ill December 20, 1924. Prior to this time he had never been sick as far as he himself could remember. He had been married 30 years. His wife had never become pregnant. His habits were said to have been good. On the afternoon of the above date, after exposure to inclement weather, he was seized with a violent chill and pain in the right side of his chest which forced him to go to bed. The next day, when seen by his physician (Dr. Anderson) his temperature was 104°, dyspnea was marked, suppressed cough and slightly rusty sputum were noted, and physical examination revealed typical pneumonic consolidation of the right upper lobe. During the succeeding 9 days the clinical picture was that



of an ordinary lobar pneumonia of considerable severity—the temperature ranging around  $103^{\circ}$ , the pulse from 100 to 120, the respirations from 36 to 50, and the consolidation seemed confined to the right upper lobe. On the ninth day a “pseudo” crisis occurred, but on the tenth day the febrile course was resumed, and physical signs began to vary markedly from day to day. The percussion note over the entire right chest became flat and a pleural collection was suspected. On January 5 (the sixteenth day of the disease), thoracentesis was performed, but no fluid was obtained. The same procedure was repeated, a very large needle being used, but each time a “dry tap” resulted. The auscultatory phenomena now showed a remarkable variability, with inaudible breath sounds one day and loud tubular breathing and resonating râles the next. A blood count made at this time showed 18,400 leukocytes. Eight sputum examinations for the tubercle bacillus made during January were all negative. On January 9, a prominent tuberculosis specialist was called in consultation. His opinion was that the patient had acute pulmonary tuberculosis which had been activated by the pneumonia. A hopeless prognosis was then given the family. The patient continued his downward course, cough and expectoration persisting, weakness becoming extreme, and temperature ranging from  $100^{\circ}$  to  $104^{\circ}$  daily. At this juncture an article concerning syphilis as a cause of delayed resolution in pneumonia came to the attention of the attending physician, and inasmuch as the course and physical signs in his patient coincided closely with the case reports referred to, it was thought that this too might be a similar case. Accordingly, 2 blood Wassermann tests were taken several days apart, and on January 29, 40 days after the onset of illness, when both specimens were reported “strongly positive” by the New Jersey State Laboratory, antisyphilitic treatment was instituted. Daily inunctions of one dram of the official mercurial ointment were given, and rapidly ascending doses of potassium iodid by mouth. Within 1 week a decided improvement was noted. On February 8 (10 days after specific treatment was begun) the patient’s highest temperature was  $99^{\circ}$ , his cough and ex-

pectoration had practically ceased, and his appetite and strength and general morale had all improved remarkably. He was without fever from this time on. On February 15, he was allowed out of bed. The physical signs in the chest, however, did not improve as rapidly as the subjective improvement would indicate; dullness on percussion over the right lung, and various abnormalities of the breath sounds, especially over the upper lobe, persisted. Mercurial inunctions were continued throughout March when slight pyalism developed. The patient’s wife reported that she rubbed her husband a total of 75 hours, using in all 60 drams of ointment. Potassium iodid was tolerated in very large doses. During March the patient took 40 drops of a saturated solution of potassium iodid 3 times every day. On April 1 he was in condition to go 20 miles for an x-ray picture of his chest (Fig. 1). This plate shows

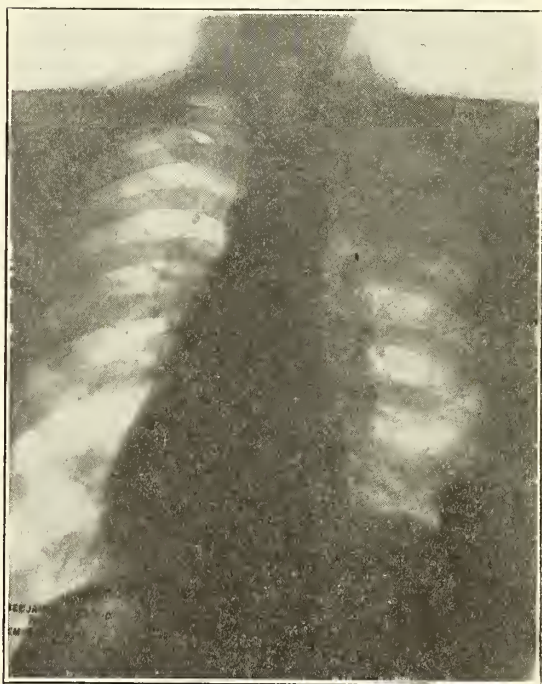


Figure 1.

very clearly an area of unresolved pneumonia of the right upper lobe of the lung, and in addition a gemma of the right base. The latter finding was entirely unexpected as at no time, either in the patient’s previous med-

ical history or his recent illness, were there signs or symptoms suggesting such a lesion. We were able at this time to examine the patient completely with syphilis in mind. The only additional evidence which could be adduced was a definite ophthalmologic picture of neuroretinitis in the right eye (which had been "weak", according to the patient, for several years). The light reaction of the right pupil was practically absent. The tendon reflexes were all normal. There were no other stigmas of syphilis. Inquiry regarding a suggestive history of chronic cough brought entirely negative replies. On April 20 the patient was finally induced to have an intravenous injection of 0.4 gm. of sulpharsphenamin, and a similar dose a week later. He felt so perfectly well that treatment seemed to him superfluous. He was then working every day. The patient was not seen thereafter until October 11, when he submitted to another x-ray examination. Figure 2 shows the condi-

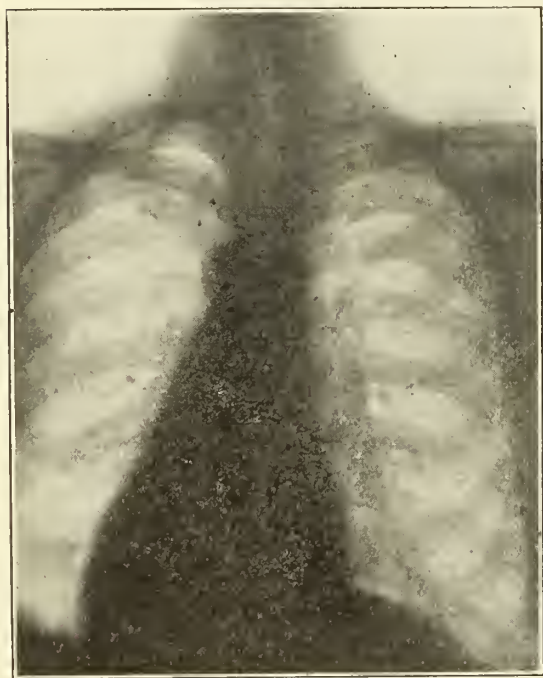


Figure 2.

tion of his lungs at this time 10 months after the the initial illness. Striking improvement is obvious. The gunma is no longer visible and the area of clouding in the right upper lobe

has practically disappeared, though there is still some abnormal fibrosis to be seen. Physical examination October 11 revealed no abnormal signs in the chest except at the right base posteriorly where a few sticky râles could be heard. His general condition was excellent. He had gained 12 lb. in weight and felt perfectly well. In spite of this, however, the Wassermann test taken October 11 was still strongly positive.

The diagnosis of acute lobar pneumonia in this case is unquestionable. The diagnosis of syphilis is also fully established. The specificity of a properly performed Wassermann test, even in the presence of an acute febrile illness, is now generally admitted by serologists and clinicians as well. In addition to 3 positive Wassermann tests this patient had an old optic neuritis and also the clear cut x-ray evidence of gunma of the lung. Granting then the presence in this patient of acute pneumonia, of preëxisting, latent syphilis, and of a subsequent serious form of delayed resolution, what proof have we that the syphilis was a potent cause of the delayed resolution?

The dramatic improvement which began only when antisyphilitic treatment was instituted, is the strongest evidence in support of our thesis. This same "therapeutic test" has been strikingly convincing in the other reported cases. Furthermore there is a curious similarity of course and physical signs in these cases which we feel is almost pathognomonic. In 3 other cases observed by one of us as well as in this case, the rapidly changing character of the auscultatory signs in the chest, together with the erroneous impression of pleural fluid, were noteworthy features.

Admitting as valid the causal relationship between preëxisting syphilis and subsequent postpneumonic delayed resolution, there are 3 possible mechanisms by which the cause may produce the effect: (1) A region of lowered resistance, determined by the acute pneumonia, may be attacked by the systemic syphilis, and a truly syphilitic lung lesion be thus produced. (2) Systemic syphilis may in some way interfere with the normal process of healing, and thus produce a simple, nonspecific, unresolved pneumonia such as may occur from causes other than syphilis. (3) The acute



pneumonia may be merely superimposed upon and activate a preëxistent chronic pulmonary syphilis, which then remains as an area of unresolved pneumonia.

Which of these is the true course of events cannot be decided on the basis of our present knowledge. We know that some of the cases reported tend to disprove the hypothesis of preëxistent pulmonary syphilis, but we know of no criteria by which to decide between the first and second hypotheses. An attempt was made by one of us to demonstrate the *treponema pallidum* in the sputum of a former case of syphilitic postpneumonic delayed resolution, with negative results. But this is by no means conclusive evidence for or against either hypothesis. Autopsy study alone could throw light on the problem.

Piersol<sup>2</sup> has suggested that "many cases of so-called pulmonary syphilis are in reality instances of postpneumonic delayed resolution occurring in syphilitic subjects." Apparently he believes, therefore, that these lesions are nonspecific. Among 295 fatal cases of pneumonia which came to autopsy prior to 1915 in the Massachusetts General Hospital, Lord<sup>5</sup> found 47 instances of organizing or indurative pneumonia. It would be interesting to know how many of these patients were syphilitic.

The end results of chronic pulmonary fibrosis of various types have been recently summarized by Atkinson<sup>7</sup> in an excellent article which however contains no mention of postpneumonic delayed resolution due to syphilis. Kline and Berger<sup>8</sup> have again brought forth evidence that a form of pulmonary gangrene caused by Vincent's organisms (which may or may not be a postpneumonic complication) is readily amenable to cure by arsphe-namin treatment. This type is to be distinguished from that caused by syphilis in which the characteristic foul sputum of gangrene is absent.

The *modus operandi* of syphilis exhibits suggestive analogies in other fields of clinical experience which seem to justify our thesis. For example, Menninger<sup>6</sup> has recently reported that of 22 surgical cases in which an underlying syphilis was present, 16 (or 72%) exhibited some difficulty of wound healing. It is gen-

erally believed that syphilis is responsible for many cases of delayed or faulty union of fractured bones. It has been stated that local injury in an already syphilitic subject may determine the development of a gumma at the sight of injury. The same factors are thought to be responsible for many case of leukoplakia, i. e. irritation of the tongue from tobacco or rough teeth in a syphilitic individual. If these analogies are valid, is it not reasonable to expect something of the same nature in the damaged lung substance of syphilitics with pneumonia?

We know that acute pneumonia in a syphilitic subject is not always complicated by delayed resolution. We know also that delayed resolution occurs in many patients who are not syphilitic. We believe, however, that with more general realization of the possibility, many more cases of unresolved pneumonia caused by syphilis will be discovered.

Summary: (1) Syphilis is an important cause of one form of delayed resolution in pneumonia, and deserves a place in our textbooks along with effusion, empyema, and the other better known complications and sequels of pneumonia.

(2) The diagnosis of this form of delayed resolution is established (a) by excluding other complications, (b) by the Wassermann test, (c) by the "therapeutic test", (d) by a history indicative of syphilis, (e) by evidence of systemic syphilis elsewhere, and (f) by the x-ray picture.

(3) A case history is presented, which, together with others in the literature, suggests that this form of delayed resolution responds readily to specific treatment, and further suggests that by such treatment these patients may be spared in after years the handicap of chronic pulmonary fibrosis.

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### SOME FEATURES IN THE CLINICAL CONSIDERATION OF CANCER OF THE TERMINAL COLON.

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It is not the purpose of this paper to consider exhaustively the whole subject of cancer of the sigmoid and rectum. Certain points that have impressed the writer will be brought out, whereas other important aspects of the general problem will not be mentioned at all. Since the symptoms of the patient are the primary reason that brings him for medical aid, it may be as well to start with a critical analysis of these symptoms and an attempt to give them relative value.

In standard descriptions of this disease a number of symptoms are given as possibly being present. The list runs something like this: constipation; diarrhea; alternating constipation and diarrhea; the passage of blood, pus and mucus; pain; feeling of weight in rectum; ribbon stools; obstruction, partial or complete; loss of weight; anemia; cachefia; metastasis to liver or inguinal glands, etc. There is no fault to be found with such an enumeration from the standpoint of fact. Any or all these evidences of trouble may occur. But it may be more helpful to discriminate the usual from the rare, and the early suggestive indications from the late and obvious signs. In the writer's experience, 2 abnormalities have come to a bad eminence as suggesting carcinoma of the lower colon. They do not necessarily prove the case, of course, but their presence always raises the question of possible cancer,

which further examination must either prove or eliminate, whereas their absence makes one *almost* safe in saying that cancer does not exist. One of these is a physical sign; the presence of blood in the stool. The other is a subjective symptom, or set of symptoms. These symptoms are so important that description in some detail is worth while. They concern a disturbance of the normal sensations and periodicity of defecation. The complaints of patients in this particular are singularly uniform and almost regularly present in cases of cancer involving the lower sigmoid and rectum. They run something like this. Often, in the morning there is a bowel movement which may not deviate greatly from normal, so far as sensation is concerned, or which may involve abnormal straining or be associated with abnormal urgency. Only for a short while, if at all, however, does this movement give the customary sensation of relief from the desire for defecation and completion of rectal evacuation. Soon there is another sensation of desire for stool, often rather impelling. When this feeling is complied with, little if any fecal matter is expelled, but there is a discharge of gas, perhaps rather violent, accompanied by a certain amount of blood, or bloody mucus. If the desire to stool is not complied with, there may be an involuntary escape of gas and bloody mucus. This urgency of desire may be quite painful. After a longer or shorter interval the same sensation and the same response is repeated. And this repetition continues for a varying number of times. Some patients are constantly distressed by it, perhaps 30 or 40 times a day. Others may suffer such a disturbance only 3 or 4 times in a day. Some get through the daylight hours fairly well, but are disturbed at night; in others the reverse is true. The patients themselves describe their trouble by various names. Some consider that they have diarrhea. Others think they are constipated because they notice that the great majority of attempts at defecation are not accompanied by actual fecal discharge, or not in any adequate quantity. The usual medical term for this condition is tenesmus. Perhaps it is quite unnecessary to go into such descriptive details, but in my experience this is the one outstanding *symptom*



of cancer of the bowel. It is not pathognomonic. Ulceration of the lower colon, fecal impaction, or foreign bodies, may cause very similar symptoms, and for obvious reasons, because tenesmus is the sensory-motor reflex response to a persistent inflammatory or mechanical stimulus to the sigmoid-rectum. In cancer, the mechanical mass of the tumor, plus its always present inflammatory complications, furnishes this stimulus. And of all the possible causes of such a set of symptoms, in my experience cancer is the most common—excluding of course, the brief attacks due to acute inflammatory or chemical irritations lasting only a few days.

The second major warning of the possibility of cancer is the presence of blood in the stool. The meaning of blood in relation to cancer is different, however, from that of tenesmus, for there are numerous and common other causes of blood in the stools. In fact, these other causes are much more common and numerous than cancer as a cause of bleeding. In tenesmus, one may fairly say that cancer must be thought of and proved or excluded as a first possibility. In bleeding, various other conditions precede new growth as a probability. The great importance of bleeding, in the symptomatology, is its great frequency. In the writer's experience, not to be sure very extensive but including over 100 cases, only 1 case failed to present this sign of disease either as a spontaneous complaint of the patient or as a result of stool examination. That case was a very small scirrhus annular growth of the sigmoid, without ulceration but with beginning obstruction. The bleeding varies in character and amount with the size, position, ulceration, and consistency of the tumor. The higher the growth the more apt the blood is to be dark and clotted; the lower, the brighter and fresher the blood. With fungating and ulcerating growths, especially low in the rectum, very considerable quantities of blood may be lost. With high, hard cancers, it may require laboratory methods to recognize blood at all. Also, there is often inconstancy in the occurrence of blood; it may be profuse for a time, and then for a time nearly stop. Finally it should be noted, repeated, and remembered, that the finding of one of the more common

causes of bleeding does not exclude cancer. The writer has himself operated on 5 cases of cancer that had been operated on shortly before for hemorrhoids.

It is not meant to give the impression that the other symptoms of cancer of the rectum are not important or valid. Many of them however, are developed only late in the disease, when diagnosis is obvious and treatment probably hopeless. Others are so general in character, and so vague in definition that they serve at best to round out and complete the impression made by a history of tenesmus and bloody stools.

To turn next to the matter of diagnosis. Three methods of examination require brief mention: digital palpation, proctoscopic examination and barium enema x-ray study. Digital touch is of course only a particular instance of the *tactus eruditus*. Experience teaches the consistency, surface configuration, and sense of fixation that, varying in some degree in each case, yet have certain common characteristics, hard to put into words, meaning "cancer". For those growths that are within reach, touch is by far the most certain and important method in making a diagnosis. Like everything else dependent on human sensation and human judgment it is not infallible. The writer recalls 2 growths that seemed so soft that a diagnosis of malignancy was not made until sections showed it under the microscope. But in the great majority of cases, if the growth can be felt, its character may be determined. Those growths situated too high to be palpated may often be seen with the proctoscope. Cauliflower masses, crater-like ulcers, stenosing annular growths with nodular surfaces and edges, suggest malignancy. Not only may growths be seen, but they may be *felt* with the proctoscope. A malignant growth is apt to arrest the instrument with a hard unyielding resistance that is quite characteristic. Lastly, tissue for section may be removed through the instrument which will give a positive diagnosis. But, cases with suggestive symptoms present themselves in which neither the examining finger nor the proctoscope can reach any lesion. Here barium enemas with x-ray study may show a filling defect or a stenosis sufficient to make an exploratory operation

necessary. Finally, there are a few cases in which all methods of examination fail to give any definite information, and yet the symptoms alone may be so suspicious that it is one's duty to explore rather than wait for conclusive evidence of malignancy.

The question of treatment turns on whether there is reasonable chance for radical cure by operative surgery. It is my feeling that radiation should be reserved for those cases in which no hope of operative cure exists. The primary need for learning whether a case is operable with hope of cure, has led to a modification in the surgical approach to all cancer cases in the writer's practice. Formerly, when a growth was situated within the lower 3 or 4 in. of the rectum, was not fixed firmly to surrounding structures, and seemed early, a resection of the rectum and growth from the perineum was done, and the stump of the sigmoid brought down to the skin of the perineum. The writer has at least 2 cases now in the fifth year since operation, and apparently perfectly well, done by this method. Two disadvantages to this method led to its practically complete abandonment. The first is a mechanical difficulty; often the extensive mobilization of the sigmoid stump necessary to bring it down is either impossible or, if accomplished, impairs the circulation of the bowel so much as to endanger gangrene of the sigmoid stump. The second is a more fundamental objection even than this, and was vividly impressed by the following case. A patient with a growth in the lower rectum that seemed favorable—small, movable and apparently fairly early—was operated on by perineal rectal resection. Gangrene of the stump occurred. The wound broke down badly, and the patient died about 1 week after operation. Autopsy showed the liver studded with numerous small cancer nodules. In short, had the operation succeeded locally, the patient would have been little benefited, as the case was already inoperable for cure. For these reasons, it is now an almost invariable rule to proceed first with a midline abdominal incision above the symphysis long enough to explore the liver—both lobes—the aortic and pelvic glands and the sigmoid mesocolon. Since doing this, ample confirmation

of our reasoning has been had. In a case operated upon with Dr. Finney 2 years ago, multiple nodules 2 and 3 cm. in diameter were found in the liver. Yet the rectal growth itself was low, small, movable, and searching questioning both before and after operation failed to bring out any history, any symptoms at all earlier than 3 months prior to operation. Other such cases might be mentioned.

Our first step, then, in the treatment of any case of cancer of the lower bowel, is laparotomy. This should determine the question of whether or not to attempt radical excision, and puts each case into one of two groups. If radical cure is not regarded as possible, the possibility of palliative measures arises. Where obstruction exists or is imminent, a colostomy should be done. A very few cases with small annular growths in the sigmoid loop, permitting an easy resection and anastomosis, might have this done as the best palliation, even though metastasis had already occurred. Cases incurable but not tending to obstruct, should simply be closed. In all these nonoperable patients radiation should be considered. In only 1 case has the writer seen much effect from it. Here the primary growth melted away as if by magic, and all bleeding and tenesmus stopped. The disease, however, progressed rapidly in the metastatic areas and the patient died in a few months of cancer. Radiation is not without its drawbacks. Burns, irritations, and severe reactions are not uncommon.

In the group of cases regarded as operable, the principle is simple—a wide resection of the growth and all removable surrounding structures. The details of operation scarcely belong in a paper of this type. A few words on choice of operative attack, however, may not be amiss. The writer has come to feel that the ideal operation is as follows: A division of the sigmoid, the making of a terminal left-sided sigmoidostomy, the dissection of the sigmoid and rectum with their fat and glands as far down as possible from above, closure of the pelvic peritoneum over this dissected mass pushed down into the pelvis, closure of the midline abdominal incision, complete removal



of the loosened sigmoid and rectum with sphincter and levator from a perineal incision—all completed in one stage. This is plainly a formidable program. It is equally plain that many cases are not suited for such heroic measures. The weak, the very fat, the obstructed, those with unusual mechanical difficulty from their physical structure of pelvis and size or location of growth must be excluded from such an attempt. It is better to do 2 operations and have a living patient, than to do a theoretically excellent one-stage operation and lose the case. All this being admitted, there yet remain a fair number of cases in which the single operation may be successfully performed, and when this seems to be true the writer thinks it far the best method to employ. Of course this entails a permanent colostomy. Many patients and not a few physicians declare they would "rather be dead than have a colostomy". They forget that a colostomy not only may be incidental to saving the patient's life, but is far easier to manage, and in every way preferable to the tenesmus and bleeding which the growth itself causes. It may be said definitely that such patients are much more comfortable with the colostomy after operation, than with the growth before. One is not comparing the condition of colostomy with normal but with the condition of cancer of the rectum.

In all those cases, which for any reason are not proper for the one-stage removal, and yet seem favorable for radical cure, the usually accepted method is to perform a colostomy at the time of the exploratory operation, and later, perhaps within 2 or 3 weeks, resect the growth and its surrounding structures at a second operation. There are various modifications of these general principles employed by different surgeons, and some different methods of attack for special types of growth, but in general the conception of the surgical problem outlined above is being more and more adopted. For the results of surgical treatment, reference is made to an excellent study by Jones, of Boston, in the *Annals of Surgery*, 1922, and the various publications of the Mayo Clinic.

## SURGICAL PROBLEMS OF JAUNDICE.

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It has been our experience that the mortality after operation for lesions of the biliary apparatus falls nearly entirely in those patients with acute purulent infections of the gall-bladder and in those patients having common duct stone or stones associated with jaundice. The occasional patient operated on for chronic calculous or non-calculous cholecystitis may die from a surgical catastrophe, but in the hands of the skilled surgeon the mortality in these cases is little higher than that after operation for chronic appendicitis. Even though this is true, it is only within recent years that systematic attempts have been made to study the pathologic physiology of extrahepatic bile duct obstruction. As yet many of the problems remain unsolved, but some of the recent advances are of considerable help to the surgeon.

Many classifications of jaundice have been suggested, but the one we believe most satisfactory in the teaching of clinical surgery is that of McNee. This author divides jaundice into 3 groups: (1) Obstructive hepatic jaundice; (2) toxic and infective hepatic jaundice, and (3) hemolytic jaundice.

In this paper we are concerning ourselves with the first two groups. It is true that it is not always possible to confine an individual case to one group, but in many instances this is possible. Obstructive jaundice associated with hepatic cell damage may be coincidental with infection, and toxic jaundice may, in its advanced stages, be associated with obstruction of the intrahepatic and extrahepatic bile passages.

Obstructive hepatic jaundice arises when there is an impediment to the passage of bile from the liver to the duodenum. This may be gradual or sudden; temporary or permanent. The clinician must assume that

in these cases there has been up to the time of the obstruction a normal formation and excretion of bile. The liver itself may or may not have become damaged preceding the actual obstruction, but until the obstacle to normal bile flow occurred, visible icterus had not been present.

In the jaundice which occurs after complete ductal obstruction, such as is seen in patients with common duct stone or carcinoma of the head of the pancreas, there is little doubt as to the mechanism by which this occurs. The retarded bile accumulates in the distended hepatic bile ducts. The liver continues, at least for a time, to secrete, but against a pressure obstacle, and the greater the extraductal pressure the less bile is secreted. When the pressure in the bile ducts of a dog reaches 350 mm. of the fluid itself, bile ceases to be secreted. This accounts for the fact that at operation we never see actual bagging-out of the liver, and the failure to observe this is not due, as was previously supposed, to a spécial resistance of the hepatic tissue.

How does the obstructed bile enter the circulation to be spread throughout the body and stain the tissue cells? Whipple and King, working on the two hypotheses previously reported, namely, that the bile entered the systemic circulation by way of the lymphatics or by way of the hepatic vascular capillaries, found that drainage of the thoracic duct in no way influenced the development of jaundice. They, therefore, concluded that the bile is absorbed by the hepatic vascular capillaries in obstructive jaundice. Ogata was unable to find any relationship between the occurrence of jaundice and the presence of visible breaks in the walls of the bile capillaries. He, however, lays particular stress on the occurrence of early hepatic-cell necrosis after biliary obstruction. Eppinger also has called attention to these areas of so-called icterus necrosis and Carnot and Herier have observed areas of such size as to call them "biliary infarcts" These areas of localized necrosis are only one of the pathologic lesions consequent upon bile duct obstruction.

It is true that some authors believe that

human bile is incapable of producing permanent hepatic cell injury. Rous and Larimore, however, state, "If this be true, man differs from all other well studied animals". Furthermore, the production of icterus necrosis is a well established fact. Anyone who has studied sections of human liver in cases presenting biliary tract diseases has observed a variety of pathologic lesions, the most striking of which is a connective tissue overgrowth resulting in varying gradations of cirrhosis. Last year Dr. George P. Muller, Dr. E. G. Ravdin and myself studied such a series of sections and were convinced of the effect of biliary tract disease and obstruction as a cause of hepatic cell damage. One of the reasons why more marked changes are not observed is due to the fact that in man total biliary obstruction results in death from toxemia before advanced macroscopic cirrhotic changes have become manifest.

There is some diversity of opinion as to whether cholangitis, or inflammation of the bile ducts, produces an obstructive ductal jaundice or whether the resulting icterus is the direct result of damage to the hepatic cells. It is quite likely that here, as in the cases of typical stone obstruction associated with infection, both factors may play an important part. Certainly in an infective cholangitis the inflammatory reaction produces a narrowing of the ductal lumen and in the finer canaliculi may actually cause complete obstruction. On the other hand, inflammations of the bile ducts initiate an hepatitis with resultant hepatic cell damage. Whether this damage is expressed in a mere functional derangement or is the result of actual liver cell injury, icterus may occur as the result of hepatic insufficiency.

The problem which is of particular interest to the surgeon is the varying reaction observed after operation. Why does one patient make an uncomplicated recovery after an operation for the relief of jaundice while another dies in 24 to 48 hours from a shock almost anaphylactic in character, and while still another succumbs in from 2 to 3 weeks from a progressive asthenia. It is interesting to note that practically all of the



fatalities after common duct operations occur in the cases of jaundice from common duct stone or in the cases of cholangitis. The risk of operation in the cases of ductal obstruction from a cause outside of the common duct is not nearly so great.

It is well known that the mechanical factor plays only a part in the disease and that other factors as yet only poorly understood cast the balance for or against life. This varying behavior after common duct obstruction is observed in animals, even in the same species. The individual case may show a preponderance of one factor over the others and it is our belief that herein lies the solution of the problem.

There are several associated problems which bear directly upon the result obtained after operation in many of these cases. There is a large margin of safety in bile elimination by normal hepatic tissue. McMaster and Rous have demonstrated that in dogs and monkeys the bile ducts from three-quarters of the liver substance can be obstructed without any clinical evidence of an accumulation of bile pigment or cholate in the animal, and in the dog nineteen-twentieths of the liver substance can be placed in stasis without the development of tissue jaundice such as would occur after complete obstruction. They found that tissue atrophy always resulted in the area of local obstruction, but that compensatory hypertrophy took place elsewhere. The amount of obstruction sufficient to produce icterus in the human is probably as great as in the experimental animal. The jaundice frequently observed in connection with local hepatic pathologic lesions is very likely due to hepatic cell injury or to hemolysis.

The variation in the physical character of the bile in cases of common duct obstruction has been observed by all surgeons who have had the opportunity of exploring the common duct in a considerable number of cases. The fluid found in the obstructed ducts may be greenish black, almost tarry and heavily loaded with bile pigment and mucus, or it may be colorless and limpid and nearly or wholly devoid of these constituents, despite a very marked tissue icterus.

In those cases in which the obstruction is the result of a calculus it is quite likely that the function of the gall-bladder, as an organ for concentration of the bile, is destroyed or very seriously impaired as the result of prolonged infection. In certain of these cases the stone may have been metabolic in origin and the function of the gall-bladder may have been but slightly impaired. In others, where the obstruction is the result of a malignant growth in the head of the pancreas or at the papilla of Vater, the gall-bladder probably functions normally.

With a progressively increasing ductal obstruction in a patient with a diseased gall-bladder, the fluid of the liver becomes less as does also the concentration per cubic centimeter of cholesterol and bilirubin. The final content of the obstructed ducts is a limpid "white bile" which is practically devoid of bile salts and cholesterol. McMaster and Rous have shown that this variation in the characteristics of the bile is due to the "differing influences of the gall-bladder and ducts upon the bile first pent up in the channels". The gall-bladder acts in 2 ways upon the bile: first, by withdrawing water and, second, by adding mucus to it. Thus the bile found in those cases in which the gall-bladder is partly or wholly functioning is thick and viscid. When the gall-bladder is functionless as the result of disease or has been removed, the secretion elaborated by the ducts, which is thin and colorless, dilutes the pent-up bile and the characteristic "white bile" results.

Rous and McMaster have called attention to the similarity between this pent-up "white bile" and the pent-up urinary secretion which results after urinary obstruction. The similarity would have been recognized long ago were it not for the complicating activities of a partly or wholly functioning gall-bladder. When the contents of the obstructed ducts have been altered through the action of a functioning gall-bladder the "hydrohepatosis" is concealed, but when this organ is functionless and the ducts are filled with a thin, white fluid there occurs a "manifest hydrohepatosis" and the similarity

between this condition and hydronephrosis is more evident.

In both organs, secretion continues after complete obstruction has taken place and the products of their metabolism must, to a certain extent, be thrown back into the blood stream of the individual. Finally, the ability to function is completely lost. The portal circulation is restricted as the intra-ductal pressure increases through an impediment to the venous flow by the dilated ducts. There results then a progressive connective tissue replacement with a coincidental parenchymal atrophy. In the liver of the human the impairment of its detoxifying properties results in death while the hepatic changes are as yet relatively slight.

It is quite likely that some of the patients dying within a short time after release of the ductal obstruction are suffering from a condition in a way analogous to the precipitation of uremia after the sudden withdrawal of urine from the urinary bladder in the retention of prostatic disease. The actual chemical changes may be at variance because of a differing function, but the underlying pathologic physiology is probably quite similar. It may, therefore, be of practical importance to slowly decompress the common duct in common duct obstruction much as we decompress the urinary bladder in urinary bladder obstruction. In this way we may avert overloading the organism with incompletely destroyed toxic by-products. The result of an over abundance of toxic split proteins is to produce sudden vasomotor collapse such as results in anaphylaxis. Heyd believes this reaction is the result of the liberation of a pancreatic toxin or ferment liberated by the surgical trauma with inadequate liver protection. Dr. Muller and I believe this latter explanation inadequate since we have observed a similar course of events in patients whose common ducts were drained without any manipulation of the pancreas.

We have observed a second type of reaction in some of our cases. For 4 or 5 days after operation the patient has done well, when there gradually develops an in-

creasing stupor, which may be preceded by excitement, followed or accompanied by evidences of circulatory failure and a renal shut-down. In most of these cases there has been considerable fluid loss by way of the bile. There has also been considerable loss of bile salts, calcium and the various other inorganic constituents of the bile. Normally a considerable portion of these are reabsorbed from the intestine and a continuous enterohepatic circulation is intact. When an external biliary fistula is present the sudden loss of body fluid plus the other elements of the bile in an individual whose liver is in a marked state of insufficiency, but which for a short time after operation maintains its proteopexic properties, may precipitate a condition not unlike the coma of uremia.

The third type of catastrophe noted after common duct operations comes in much more insidiously. The patient is apparently doing "too" well. Gradually the temperature becomes subnormal, increasing weakness is manifest and death occurs 3 to 6 weeks after operation from inanition. There is little doubt in our minds but that this condition is one of prolonged dehydration with deficient digestion and absorption and an associated loss of pancreatic juice and of the inorganic elements of the bile. There has been considerable work done of late on the calcium metabolism. Babkin has described softening of the bones in long standing biliary and pancreatic fistulas, which would at least suggest a depletion of calcium from the body. Although this depletion can scarcely be entirely ascribed to the loss of calcium by way of the bile, still, when large amounts of bile are lost, so too, are relatively large amounts of calcium. The depletion of calcium is further induced since with the deficient bile in the bowel the ingested fats are not absorbed and the fatty acids combine with calcium to form insoluble soaps which are excreted in the feces. The release of extraductal pressure undoubtedly upsets the mechanism by which the sphincter of Oddi acts. From the skin excoriation which we have noted in some cases it is quite probable that this sphincter remains



contracted and that the major portion of the pancreatic juice, taking the path of least resistance, passes upward in the common duct to pass out through the external biliary fistula. Thus we have numerous factors tending to produce an alteration of normal metabolism and death may result from a deficient metabolism, both food and chemical.

The delayed coagulation of the blood in jaundiced patients is due to the existing hepatic insufficiency. It is not known with any degree of accuracy whether the thrombo-regulative mechanism is concerned with the liver more than any other organ, but there are certain facts which lead one to believe that the relations of the liver to coagulation of the blood are particularly close. The liver plays an important part in the formation of fibrinogen and there is also evidence that it is closely related to the formation of antithrombin which will, to a marked degree, inhibit coagulation. Whipple and Walters have shown that calcium salts given intravenously will restore to normal a disturbed coagulatory mechanism. This may be due to some specific effect of the calcium on the anti-thrombin, which otherwise inhibits the action of fully formed thrombin.

From the foregoing discussion, one can see the necessity for encouraging toxin elimination by the administration of fluids previous to operation. This is done by proctoclysis, hypodermoclysis or intravenous introduction. On Surgical Division B we attempt to introduce from 4000 to 6000 c.c. every 24 hours. There is no doubt but that it improves the clinical condition of the patient. Glucose in a 5% solution is given by bowel, since we know that patients with a sufficient amount of glycogen in the liver withstand general anesthesia much better than those without it, and 5 c.c. of a 10% solution of calcium chlorid is given intravenously daily before operation to decrease the bleeding and coagulation time. The plasma carbondioxid is estimated so that if a deficiency in the acid base equilibrium exists this can be corrected. If there has been persistent vomiting, an alkalosis may be present and ammonium chlorid is administered by bowel.

Although local anesthesia may be considered it does not permit of sufficient relaxation for exploration. We use it in the very sick patients in whom only cholecystostomy is attempted. In all other cases local anesthesia plus ethylene is, in our opinion, the anesthesia of choice. Ether anesthesia causes a further derangement of the liver parenchyma with subsequent suppression in the amount of bile secreted and only adds to the load which the patient has to carry.

The question whether or not to explore the common duct will depend upon the condition of the patient. In some cases the calculus is removed and the duct drained, in others only the duct is drained and no search is made for the stone. This more extensive procedure can await the time when the patient is better able to withstand the operation. Gradual decompression can be obtained by permitting intermittent drainage through the T-tubes or by utilizing an apparatus similar to that used in decompression of the urinary bladder.

The patient is given fluid postoperatively similar to that given preoperatively. In the bad risk cases 500 to 1000 c.c. of 10% glucose are given intravenously every 24 hours with sufficient insulin to assist in its utilization. In a very desperate case we recently used the continuous intravenous drip with remarkable results.

Morphin is given in very small amounts because it depresses liver function. Calcium chlorid is administered intravenously to offset a calcium deficiency; we have given as much as 30 c.c. of a 10% solution in 24 hours. If there is any evidence of bleeding postoperatively, blood transfusion is resorted to. We have not found unmodified blood superior to citrated blood in this respect. Moist heat is applied over the liver area, after the suggestion of Crile. Whether it is of value is doubtful.

The bad risk cases are usually those associated with infection and calculi; mortality in the cases of obstruction from tumor being decidedly lower. All cases, however, demand the most meticulous preoperative attention and an understanding of the underlying pathologic physiology, if we are to reduce the present high mortality.

## MODERN CONCEPTIONS OF HEPATIC FUNCTION.

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The principle pigment of the bile is bilirubin and in a discussion of bile pigment, it is bilirubin that is meant. That hemoglobin is the only source of bilirubin we believe for several reasons.

(1) For many years it has been known that bile pigment is formed in blood extravasations in the tissues, as in bruises or hematomas, and in sanguineous exudates in the pleural cavity. The pigment found in these cases has been called hematin, but Rich has recently shown that hematin and bilirubin react chemically in exactly the same way and that their oxidation and reduction products are identical.

(2) It has also been shown that an excess of hemoglobin in the circulation, whether from increased intravascular hemolysis, or from the experimental introduction of free hemoglobin, is followed by an increased formation of bilirubin.

That other factors do not influence bilirubin formation and output has been the conclusion drawn by Broun, Rous and McMaster from their studies on the total bile. After Whipple and Hooper reported the results of carbohydrate feeding, which convinced them that the amount of bile pigment formed can be modified at will by diet factors, Broun, Rous and McMaster made extensive and elaborate studies on the total bile output of dogs, using various diets and related liver substances, and found that the only substances which they could feed that would increase bilirubin output were pure bilirubin bile, and liver tissue.

Assuming, then, that hemoglobin is the source of bilirubin, there remains the question of the relation of the liver to bile pigment metabolism. For many years it was believed that the liver parenchyma alone was concerned in the formation of bilirubin and that it was a secretion of the liver. The inability of experimental animals to form a bile pigment after removal of the liver was offered in sup-

port of this view. The work was done on geese and birds. In 1889, Löwit observed that in the Kupffer cells in the liver, spleen and bone-marrow which form part of the reticulo-endothelial system, could be seen red cell remnants, hemoglobin and bilirubin, and he concluded that under certain pathologic conditions these cells could form bile pigment. He did not question, however, that the epithelial cells of the liver also formed it.

In 1913, McNee repeated the experiments of Minkowski and Naunyn, referred to, of removing the livers of geese and then causing intravascular hemolysis. His results coincided with theirs, in that no subsequent jaundice developed, but his interpretation differed and it is on his conclusions that we base our present ideas concerning jaundice. McNee believed that jaundice did not occur, not because the liver cells proper were removed, but because in birds practically the whole reticulo-endothelial system is in the liver, and this was removed in the experiment. The reticulo-endothelial system, which includes the Kupffer cells, is more widespread in other animals, including man, being found mainly in the liver and spleen but also in the perivascular tissue, the bone-marrow, the lymph glands and the blood itself. For this reason most of the later experimental work has been done on dogs.

When the liver was completely removed from the dog by Mann, Bollman and Magath, bile pigment was found in the plasma in increasing amounts. The ingenious method which they used in removing the liver and maintaining life in the dog was the culmination of years of effort to carry this out, with, before their work, nothing but failure. Their results have been confirmed by Rich and others and similar results have been obtained by using the circulation of the head and thorax alone.

The only conclusion from all this evidence that can safely be drawn is that the reticulo-endothelial cells can, and do, form bile pigment and that the epithelial liver cells are not necessary to its formation.

In 1913, van den Bergh and Schnapper published the results of their work with Ehrlich's diazo-reaction for bilirubin. Until this time



no satisfactory test for small quantities of bilirubin in the blood was known.

When using the diazo-reaction for quantitative determinations of the pigment in the serum, van den Bergh noticed that in certain cases of jaundice it was unnecessary to bring the bilirubin into an alcoholic solution to obtain the reaction but that merely the addition of the diazo-reaction to the serum produced it. It was evident that bilirubin was present in the serum in different forms. Examining the sera of patients with jaundice, he found that when the jaundice was due to obstruction of the common duct by stone or tumor, the diazo-reagent reacted directly and immediately with the serum. Normal diluted bile reacted in the same way. When the jaundice was due to increased hemolysis, as in ictero anemia, the addition of alcohol was necessary to produce an immediate reaction. This was also true of bilirubin in hemorrhagic effusions.

This proved to be a method for differentiating between the bilirubin which, after it entered the bile reentered the blood stream, and bilirubin due to hemolysis which had never left the blood. The latter type is present in small amounts in the serum of all normal individuals.

This led to a classification of jaundice based on the theory of the reticulo-endothelial origin of bilirubin. The bilirubin so formed is then presumably present in the blood stream. From the blood it is absorbed by, or passes through, the polygonal cells which line the bile capillaries and is then excreted by way of the bile. Normally, then, a small amount of bilirubin would constantly be present in the blood and this has been found to be the case. When the breaking down of the erythrocytes is very rapid, as in certain diseases, notably ictero-anemia, the pigment would be present in the blood in larger amounts, and this has also proved true.

After the bilirubin has entered the bile, its reaction to the diazo-test changes, giving an immediate direct reaction to the reagent. When obstruction of the common duct occurs with subsequent jaundice, the blood contains large amounts of bilirubin which gives this reaction.

Therefore, it is assumed that any jaundice

in which the blood bilirubin gives an immediate reaction to the van den Bergh test is obstructive in origin, while any jaundice in which this reaction does not occur is of hemolytic origin.

The clinical importance of this differentiation is evident. There are many patients with partial obstruction and with only slight, or latent, jaundice which offer problems in diagnosis. By means of this test the origin of the jaundice may be established. Last year a student was admitted to the hospital with an extreme jaundice. This had been present since early childhood, probably since birth. He was referred to the hospital with a diagnosis of congenital stricture of the bile-ducts. When his blood serum was examined by the van den Bergh test, however, the bilirubin was found to be of the hemolytic type. In spite of a spleen that was not palpable the operative procedure advised was splenectomy, a diagnosis of congenital ictero-anemia having been made.

By means of the van den Bergh test quantitative estimations of the amount of bilirubin in the blood can also be made and afford a valuable means of following the course of a jaundice and determining slight increases. We have found that secondary anemias show no increase in blood bilirubin, regardless of severity, while primary pernicious anemia almost invariably is accompanied by hyperbilirubinemia.

Broun, Rous and McMaster have recently presented evidence which seems to prove the reabsorption of bilirubin from the intestine after its excretion in the bile. Whipple has never been willing to admit that bile products are reabsorbed but the former investigators, by estimating the twenty-four hour output of bilirubin and of urobilin in the bile of a dog with common duct drainage were able to show that feeding bilirubin increased both the bilirubin and urobilin output, though feeding urobilin increased only the urobilin output. An interesting and suggestive observation was made by them that the hemoglobin of the animal fell when all the bile was drained through the tube for several days but rose after bilirubin feeding—confirming the fact that bilirubin could be reutilized in blood formation. This ac-

cords with, and perhaps explains, Whipple's statement that liver was the best hematinic in chronically anemic experimental animals.

While there are many problems remaining to be solved and points to be clarified, the recent work is very promising and some of it, as the van den Bergh test, is of immediate clinical importance.

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## OBSTETRIC SERVICE OF THE ORANGE MEMORIAL HOSPITAL.

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The obstetric service of the Orange Memorial Hospital became a separate department in 1914. Up to this time, the obstetric work was a part of the medical service and was divided among the 4 attending physicians and their juniors. The service was reorganized with 1 attending obstetrician who has a continuous service and 4 juniors who alternate every month; 2 of the juniors serve in the out-patient department every other month. Each of the 4 hospital internes serves for 3 months on the obstetric service.

It was soon apparent that the department had outgrown its quarters and obstetric patients were scattered in various parts of the building often occupying beds needed for other patients. In 1919, it was thought advisable to make an effort to raise sufficient funds to provide a separate building for maternity cases. This was accomplished, and the new building was opened for patients on June 15, 1921.

The maternity building is a fireproof structure, 171 feet in length by 56 in width, consisting of 4 stories and basement. The first floor contains a reception room and supervisor's office; a separate suite of labor, delivery, and sterilizing rooms for ward patients; a ward accommodating 16 to 24 patients; 3 separate rooms for abnormal cases, a regular nursery, a premature nursery, and a septic

nursery. Each floor has a solarium. The second floor contains the semiprivate rooms with beds for 2, 3, and 4 patients in a room (18 beds in all) and a nursery. There is another suite of rooms, closed off from the main corridor by double doors, consisting of: 3 labor rooms, 2 delivery rooms, a sterilizing room, work room, lavatory, and supply closets. Here is where the private and semiprivate patients are delivered. The labor beds are narrow and are on wheels so that the patients are taken into the delivery rooms on their beds. There is also a room and bath on this floor with lockers for the use of physicians while attending cases. The third and fourth floors each contain 16 private rooms and a nursery. A number of the private rooms on the third and fourth floors have baths adjoining. The basement is used for store-room and also has a locker room for patient's clothing. The nurseries have bathrooms adjoining and the babies are bathed with a spray. All nurseries, as well as labor suites, are equipped with double doors with Corbin springs in order to keep the building as quiet as possible.

Patients entering the hospital in labor are taken directly to one of the labor suites instead of to their rooms, thus avoiding considerable noise and confusion on the different floors. An automatic elevator is always in commission for the use of visitors, patients, doctors, and nurses. A smaller automatic elevator carries food and provisions to the different floors. The building has proved to be of great assistance in the work and ought to help raise the standard of obstetrics in the community. Any physician in good standing may send obstetric patients into the private rooms of this hospital. As the number of semiprivate beds is limited, these are restricted to patients residing in the Oranges, except in special emergencies.

The prenatal work of the department is part of the work of the Maternity Center of the Oranges. Three organizations are represented in this work: Orange Memorial Hospital, St. Mary's Hospital, and the Visiting Nurses' Association. Special prenatal nurses go to the homes of the patients, take their blood pressure, make a simple urinalysis, give advice, and leave printed instructions. Once or twice, or



oftener if necessary, the patient is sent to one of the hospital clinics which are held twice weekly in each hospital. There she is examined to determine the presentation of child and size of pelvis, the heart and lungs are examined, blood pressure is checked up, a complete urinalysis made, and a Wassermann taken.

The patient has a card on which the nurse records her findings and which the patient takes to the clinic for the obstetrician to add his record. The card is taken to the hospital if the patient goes there for confinement; or, if remaining at home, she has it there for the convenience of her physician. When it is known that a patient expects to enter the hospital, a copy of the record is kept on the history sheet at the clinic for future use. No patient who has a physician is referred to the hospital for confinement unless abnormal conditions are found and then only after consultation with the physician or midwife in charge. The Maternity Center of the Oranges now does the work formerly carried on by 7 different organizations. This change for greater efficiency was made possible by the Council of Social Service Agencies of the Welfare Federation of the Oranges. During the past year, the prenatal nurses made about 4000 visits and new patients were referred by numerous agencies: Physicians, Midwives, Orange Memorial Hospital, St. Mary's Hospital, East Orange Board of Health, Metropolitan Life Ins. Co., Visiting Nurses, Orange Board of Health, Diet Kitchen, West Orange Board of Health, Bureau of Charities, South Orange Board of Health, friends, and patients themselves.

The delivery table used is a modification of the Ingraham table that has proved very satisfactory. All normal and simple forceps cases are delivered with the patient's feet resting on the table, the knees being supported by straps attached to upright bars; this avoids the strain sometimes felt by the patient when the feet are elevated. After being taken to the delivery room, the patient, having been scrubbed and shaved previously, is painted with iodine (2.5%) about the thighs, buttocks and vulva, followed by alcohol (50%) before sterile covers are applied. As soon as the baby is born, the mucus is gently cleared from

its throat with moist cotton, and the eyes are bathed with boric solution; 20% solution of argyrol is dropped in each eye. The cord is tied, cut, and dressed with sterile gauze. The baby is then placed in a crib and before being taken from the room a necklace of beads with the name spelled out is placed on the baby and sealed, so that it may be removed only by cutting the thread when the patient is discharged. For one year, blood was taken from every cord for a Wassermann but the results obtained did not warrant continuing the procedure. The perineum is repaired if necessary and the placenta delivered, after which a dram of ergot is given and, frequently, 0.5 c.c. pituitrin by hypodermic as well. A sterile dressing is applied and the patient taken to her bed on a stretcher. The fundus is held for one-half hour or longer if necessary. When a ward patient is discharged her name and address and date of birth of baby are given to the Social Service Nurses who notifies her when to return to the clinic for the follow-up examination (6 weeks after delivery). A card is given to the patient showing birth-weight of baby, lowest weight while in hospital, and weight when discharged. If at the follow-up examination some abnormal condition is found, the patient is referred to the gynecologic clinic. Babies, if normal, are referred to one of the welfare stations; if abnormal, they are sent to the pediatric clinic.

Rules for House Staff and Nurses, as well as directions for routine care of patients, are added here, as they may be of some interest.

#### RULES FOR HOUSE OBSTETRICIAN.

(1) Make rounds as early as possible so as to be able to report condition of patients to senior or junior attending.

(2) Examine all patients admitted as soon as possible after being notified. Examination to include:

- (a) Brief antepartum history.
- (b) Abdominal, and vaginal or rectal examination.
- (c) Listening to fetal heart.
- (d) Blood pressure.
- (e) Urinalysis.
- (f) Pelvimetry.
- (g) Examination of heart and lungs.

(3) After examination report condition of every patient in labor to Senior Attendant and nurse in charge. If patient enters between 10 p. m. and 7 a. m., not in very active labor, report to be delayed until 8 a. m.

(4) If any case is urgent and Senior Attendant cannot be reached, call Junior Attendant on duty, and then other Junior Attendants if necessary.

(5) Forceps not to be used, or any operative procedure done on any patient, without advice of attending physician, except in a case of greatest emergency. Pituitrin or morphin not to be given.

(6) Circumcise all male babies on eighth or ninth day if parents have given written consent and condition is good.

(7) Report progress of patients in labor night and morning. Report any abnormal condition to Senior Attendant at any time.

(8) Examine every patient on twelfth or thirteenth day so that there need be no delay in leaving the hospital when discharged.

(9) When possible, attend prenatal clinic on Monday and Friday, and when a patient reports to clinic or hospital at any other time, examine her for any possible abnormality. If normal, have her return on regular clinic day. If abnormal, admit patient to hospital.

(10) Report all abortion cases to Junior Attendant on duty. If case is urgent and you are unable to reach him, call senior on duty, and so on, as above.

(11) Abortion cases not to be given morphin before curettage.

(12) Treat ward patients as you would your private patients, giving them all possible consideration and relief from pain.

#### PRELIMINARY TREATMENT OF ECLAMPSIA.

On admission take blood pressure, examine urine, and make abdominal and vaginal examinations. If cervix is long and tight, prepare for cesarean section. If cervix is soft and partly dilated, give  $\frac{1}{4}$  gr. morphin.

#### PRELIMINARY TREATMENT OF PLACENTA PRAEVIA.

If there is much hemorrhage, pack vagina with iodoform gauze and have the blood typed.

#### CARE OF MOTHER.

On admission take temperature, pulse, and respiration; and again at 4 p. m. Send specimen of urine to laboratory. Specimen of private patients to be sent to laboratory if specimen has not been examined within 1 week. Shave, give s. s. enema if time, sponge bath, scrub with green soap, sterile water, and bichlorid 1:10,000. Apply sterile pad.

While patients are in labor, give s. s. enema every 12 hours and see that patients void at least every 4 to 6 hours.

Antepartum patients are to remain in bed until after examination and are not allowed to go to bathroom without special order. Diet as ordered.

Preparation on table: paint field of operation with 2.5% iodine solution followed by alcohol 50%.

For induction of labor, scrub field of operation with green soap solution, sterile water, and 1:10,000 bichlorid solution.

Sterile gloves must be used in making examinations, as well as during delivery.

It is requested that when patients are in labor 24 hours and over that the case be reported to the obstetric staff.

Hospital routine after-care must be followed.

#### AFTER-CARE OF MOTHER.

Fundus to be held half an hour or longer if necessary; watch carefully for hemorrhage first 6 hours after delivery.

Special abdominal binder applied 1 hour after delivery, and removed on fifth day. Sterile precautions after voiding. Lysol 0.5% and sponge with forceps. Perineal dressing to be changed q. 4 h. for first 12 hours; then q. 8 h.

Report to supervisor if patient has not voided 12 hours after delivery.

Loose breast binder may be used if breasts are full and heavy.

Nipples to be bathed with boric acid solution before and after each nursing.

Lead nipple shields to be used for 10 days, and longer if nipples are tender. The shields are washed and boiled for 1 minute, while baby is nursing. When lead shields are not



used. apply albolene and cover nipples with sterile gauze after nursing.

Liquid diet, labor day. Soft diet, first day p. p. Light diet, second day p. p. Full diet, eighth day p. p.

Sit up in bed on fifth day. Out of bed, tenth day. Examined by doctor, twelfth day (ward patients). Discharge, thirteenth day.

Castor oil, 1 oz. at 6 a. m. second day, then enema or cathartic as ordered.

If any cathartic ordered is ineffectual by 4 p. m. the day following administration, it is to be followed by low s. s. enema.

When catheterizing, the tip of the catheter must be immersed in 25% solution of argyrol before inserting.

On and after the fifth day, turn patient on abdomen for 20 minutes a. m. and p. m.

Mother may watch baby being bathed on twelfth or thirteenth day.

All patients to have mineral oil 1 oz. q. n. beginning night of third day and low s. s. enema every other day if necessary.

For after pains, give codein gr.  $\frac{1}{2}$  q. 2 h. to p. r. n.

#### CARE OF BABY.

Argyrol 20% solution, 1 drop in each eye at birth and on second day.

Weigh and oil half hour after birth.

Watch for bleeding from cord, also for urine.

Bathe at end of 6 hours; (do not remove first dressing until cord is off unless soiled) and put to breast. Premature babies oiled, not bathed. Feed q. 2 h.

Nurse every 6 hours, first 24 hours.

Nurse every 4 hours, 10-2-6 second 24 hours.

Nurse every 3 hours, 9-12-3-6 third 24 hours and thereafter.

Nurse every 4 hours at night when on 3 hour schedule.

Give p. c. formula if necessary. Condensed milk 1 dr., sterile water 2 oz.

Wash out mouth once daily with sterile water.

Take temperature at 8 a. m. and 4 p. m.

Weigh every other day.

Dress cord with sterile gauze when necessary.

Record when cord is off.

Dress navel with boric acid powder after cord comes off.

Bands to be kept on baby while in hospital.

Cleanse and oil after voiding; soap and water, then oil after stool.

Exceptions to these rules when ordered.

All babies to have a s. s. enema p. r. n.

#### SPECIAL CARE FOR PREMATURE BABY.

Weigh, oil, and place in premature box—temperature 85° to 90°.

If weight is 4 lb. or less, a premature jacket is applied.

For first few days feed breast milk or formula with a dropper or special feeder q. 2 h. Later, feed q. 2 h. during the day and q. 3 h. or q. 4 h. at night.

Do not bathe. Oil daily or if quite weak every other day.

When strong enough, temperature is gradually lowered in premature box and baby is taken out to the breast.

If necessary, give 3 drops of whiskey before each feeding.

#### RULES FOR NURSES.

Diets: Regular—everything; light—no meats, may have white meat of chicken, and fish; soft-soup, desserts, may have baked potato; liquid—any fluids.

All patients going home should go to carriage entrance in wheel chair, and must be accompanied by a nurse, who is to see that chart goes to office.

Locker-rooms to be kept locked at all times. Key on key board. Record number of locker in clothes book.

All flowers to stand in bath room over night. They must not be put in hall. Each nurse is responsible for cleaning after arranging flowers. This must be done by 9 a. m. Flowers to be out of rooms by 7 p. m.

See that orderlies open windows and transoms at landings.

Fancy covers are not allowed under glass

top tables as the glass will be more apt to be broken.

Patients may have electric fans brought in to them. When this is done please notify office of supervisor, who will provide extra connection if necessary. These connections must be returned when patient leaves the hospital.

When door of patient's room is open, please place screen in front of door.

Blankets must be submitted for inspection before being sent to laundry.

Night nurses to report silver count at 7 a.m. Day nurses report at 7 p. m. Written reports every Friday to go to office of supervisor.

Wards, halls and rooms to be dusted directly after lunch q. d. High dusting to be done twice a week.

All soiled gauze, not infected, to be put in mesh bags provided for that purpose and sent to the laundry.

Soiled napkins and tray covers to be put in bag in kitchen in order that maid may take them to laundry at 11 a. m.

Gertrudes for babies may be omitted during the hot weather.

All infected gauze and perineal dressings must be discarded in paper.

Formalin to be used for all disinfecting of linen and utensils.

Husbands and next nearest relative of obstetric patients are only visitors allowed without special permission.

Beads are to be removed by cutting between lead bead and last knot, in the presence of mother. Scrub with green soap and water; when thoroughly dry and clean return to delivery room. If patients wish to buy necklaces, report same to office of supervisor. Charge \$1.50.

Lysol 0.5% solution to be used in cleansing patient before every vaginal examination. Examining tray to be found in utility room.

Telephone the office of all patients going home. This must be done as soon as the discharge is written.

All narcotics to be recorded in Narcotic Book. The nurses must see that all orders are checked up before going off duty.

Each and every nurse is requested to leave

her place of duty in order before going off duty. There is a place for everything and everything must be left in that place.

Nurses will see that all antepartum records are written up and signed by the doctor before patient is discharged.

All flowers, plants, etc., must be opened in the patient's room.

Nurses will please save all clean cotton from pads and put in bags for that purpose. It will be sent away, picked, sterilized, and made to use as waste cotton.

#### OFF DUTY FOR ALL NURSES.

Three hours a day.

One afternoon a week—beginning at 1 p.m.

All nurses must report to nurse in charge of floor before going off duty.

Six hours on Sunday.

The following statistics for 1025 may be of interest:

Number of cases	945
"    "    physicians	89
Day cases	503
Night cases	442
Boys	482
Girls	471
Twins	8
(4 male, 3 female, 1 each)	
Breech cases	46
Versions	7
Face presentations	3
Low forceps	103
Mid forceps	78
High forceps	22
Total	203
Placenta praevia	8
Cesarean	24
Precipitate	5
Eclampsia	7
Induction of labor	20
Stillbirths	20
Maternal deaths	2
(Placenta praevia, ward case..1)	
(Eclampsia, private case.....1)	
Reasons for Cesareans:	
No progress in labor	6
Toxemia	1
Eclampsia	3
Placenta praevia	3
Transverse presentation	1
Fibroid uterus	2
Contracted pelvis	6
Amputation of cervix with no dilatation	2
Cause of still-births:	
Placenta praevia	1
Difficult forceps	1
Version and breech	5
Macerated fetus	3
Too premature	6
Premature separation of placenta	2
Toxic mother	2
There were no cases of sepsis.	



# JOURNAL OF THE MEDICAL SOCIETY OF NEW JERSEY

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Each member of the State Society is entitled to receive a copy of the JOURNAL every month. Any member failing to receive the paper will confer a favor by notifying the Chairman of the Publication Committee of the fact.

NOTE.—The transaction of business will be expedited, and prompt attention secured if,—

All papers, news items, reports for publication and any matters of medical or scientific interest, are sent direct to THE EDITOR, Atlantic City, N. J.

All communications relating to reprints, subscriptions, extra copies of the JOURNAL, books for review, advertisements, or any matter pertaining to the business management of the JOURNAL are sent direct to THE CHAIRMAN OF THE PUBLICATION COMMITTEE, (address above), Newark, N. J.

## TAKE NOTICE.

### Importance of Automobile Insignia.

During the session of the House of Delegates on June 18, at Atlantic City, President Donohoe received the following telegram from the Commissioner of Motor Vehicles, William L. Dill, State House, Trenton:

"Will you kindly request the members of your society to secure insignias for display upon their automobiles and ask them to return to us the insignias which we issued in other years and which many physicians still persist in using. Unless we can have your whole-hearted coöperation in our desire to individualize your profession, we will have to abandon our efforts to give service to you."

The House of Delegates immediately passed a resolution expressing appreciation of Commissioner Dill's courtesies to the medical profession and instructing the Secretary to telegraph acceptance of his offer to supply the new insignia. Thus far the Society could go as a whole but it is now necessary for each member to take the required steps to procure such distinguishing marks for his own machine, and to deliver his old, and now useless, insignia to the Commissioner's office. It is requested that you do this at once, to your own personal advantage and in the interest of the organized profession.

Get the new insignia at once. Discontinue use of all others.

## TIME TO URGE TYPHOID VACCINATION.

The practicing physicians of New Jersey reported more than 740 cases of typhoid fever

during the year 1925, an increase of a hundred over the preceding year. The increase occurred despite the fact that widespread epidemics of typhoid fever caused by contaminated water, milk, and shellfish have been obviated largely by protecting municipal water supplies, the supervision of milk production and handling, and the careful inspection of the water in which shellfish are grown; work carried on so effectively by the State Department of Health and the large city health departments.

Investigations into the history of the cases reported last year showed that only in 2 instances was a single source responsible for any large group of cases: The oyster-borne outbreak of 1924 extended into January, causing some of the cases reported in 1925; and an additional group were traced to drinking water from a polluted spring at Hook Mountain, in New York State. Aside from these instances—and a few cases traced to a carrier who infected immediate associates—the majority of cases appear to have been contracted here and there, probably at roadside refreshment stands, automobile camping grounds, and at those summer resorts in which water supplies are not protected and safe sewage disposal is neglected. Such places constitute a serious menace to health, for investigations of the State Department of Health have revealed many unsanitary conditions in rural communities. Although an attempt is made to remedy dangerous conditions when detected, the State Department of Health is without adequate in-

spection facilities to cover the entire State, and most of the rural health boards have no facilities whatever for the inspection and improvement of local sanitary conditions. Here, then, is the source from which we may expect the future unnecessary cases and deaths from typhoid fever.

Removal of the conditions causing the spread of typhoid fever is a public duty—a responsibility of State and municipal governing bodies. The State Medical Society can do much to urge the provision of adequate health protection, but individually the physicians of the State have a more immediate duty before them in urging antityphoid vaccination upon those of their patients who expect to pass their summer vacations in rural sections, or who take long automobile tours, or who visit remote lake resorts.

The State Department of Health advises the use of the bacterin containing typhoid bacilli only, instead of the combined vaccine (including paratyphoid A and B), for it is generally believed that the addition of the paratyphoid bacilli increases the severity of the reaction to vaccination. The United States Navy uses only the simple typhoid vaccine, for after five years' experience with the combined the Navy officials found that the rates for paratyphoid fever were not materially lowered by the immunizing treatment against this disease. As paratyphoid fever is so seldom reported in New Jersey, it is a question whether or not it is worth while to protect against the disease even if we were sure that the combined vaccine would produce such protection. If inclusion of the paratyphoid bacilli does increase the severity of the reaction to vaccination, it would seem advisable for physicians to follow the advice of the State Department of Health and use the uncombined typhoid bacterin when immunizing their patients against typhoid fever.

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#### CRIMINAL WASTE.

The morning papers of June 11 contained the announcement, under striking headlines, "10,000 Gallons of Alcohol to Be Poured Into Bay Today". There followed the explanatory

statement: "Customs men will pour into the waters of New York Harbor today more than 10,000 gallons of alcohol found on the steamship Eker, which was seized off Yonkers on April 29".

It will be noted that considerable time—6 weeks—elapsed between the dates of seizure and disposition of this cargo, and it must be assumed that some consideration was given to the question of disposing of this alcohol otherwise than by pumping it from the ship's tanks into the bay, for the order to dispose of it in the latter manner was signed by a Federal Judge.

As a nation we are notoriously wasteful people, but this act seems beyond the limit of excuse or reason. Think what benefits might have accrued to the sick and suffering inhabitants of New York City, or of any other town in that Judicial District, by giving that alcohol to the hospitals. At the very moment when such institutions are conducting "drives" on the public, and appealing to local, county or state legislative bodies, for funds to purchase needed hospital supplies, among which alcohol is an important item, the National Government wastefully and deliberately destroys \$50,000.00 worth (at wholesale rate) of it. Can you beat it, as an act of folly?

Our rage has nothing to do with the Prohibition Amendment, the Volstead Law, or the punishment of violators of the Customs Regulations, but is based on the criminal folly (for such waste is heinous wickedness) of such an uneconomic policy. This cargo had been confiscated in due process of the law; surely some better means of disposing of the prize might have been found. As tax-payers we should protest. As physicians and hospital officials, familiar with the needs of the sick and with the struggle to obtain hospital supplies, we certainly should protest against such wanton waste.

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#### WOMAN'S AUXILIARY.

Among the many interesting and important developments of the Annual Convention, few are of more promising portent than the action taken by the House of Delegates in author-



inzing the organization of a Woman's Auxiliary to the State Society. Starting in one of the southwestern states several years ago and receiving the approval of the national association, this movement has spread fairly rapidly until there are now active auxiliaries in 12 states. Our neighbor on the west, Pennsylvania, organized such a society last year, and it was one of her members, Mrs. W. Wayne Babcock, now the National Organizer for the movement, who presented the question to us. In a model 5 minute speech, she presented an explanation of the aims and objects of the auxiliary, and the reasons why New Jersey should join the procession, so clearly that the House of Delegates immediately gave its approval to the project.

There are many ways in which a Woman's Auxiliary, composed of the wives, mothers and sisters of members of the State Society, can help to promote the work and develop the program of the organized medical profession, and we bespeak your personal interest in organizing the branch in your county. When the work gets under way and the women of your district are appealed to, advise and encourage them to enter the local auxiliary that they may work beside you in promoting the good things this society stands for.

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### IMPORTANT FEATURES IN THIS ISSUE.

While every feature of the Journal may justly be classed as "important", there are several to which we would specifically direct your attention because they require some action on your part, and because that action will be more efficient if taken promptly.

First, you should read and act upon the request of the Commissioner of Motor Vehicles regarding insignia for your automobile; that is highly important if you desire to enjoy the special privileges accorded to the profession.

Secondly, you are particularly invited to read the article on Group Life, Health and Accident Insurance. Here is a proposition that must be of interest to every member. No

similar opportunity has ever before been presented to you; regardless of age and without physical examination you may obtain life insurance at a premium rate equivalent to that ordinarily offered to the man 29 years of age. Read the policy described in the following pages, and then promptly register your candidacy for such a policy,

Thirdly, we would call your attention to a message from the American Medical Association concerning the working of the Sheppard-Towner Act, and an accompanying request from the Chairman of the Welfare Committee of the State Society that you write at once to your Congressman and Senator protesting any extension of appropriation in support of this act and favoring its repeal in accord with a Bill now pending in the House of Representatives. Such action will be in the interest of public economy, in the interest of preserving states' rights in the control of health matters, and in your own professional interests through prevention of the insidious establishment of "state medicine".

Fourthly, we would suggest the careful perusal of Dr. Donohoe's Presidential Address. His review of the past year's work and his suggestions for the future, based upon two years of close application to the Society's problems, are worthy of attentive consideration. Particularly interesting is the argument set forth in favor of attempting to secure a definite and permanent home for the oldest state medical society in the United States, a headquarters from which to conduct the immense work to which the Medical Society of New Jersey is now devoting its energies. This idea, so auspiciously launched by President Donohoe, was taken up by the House of Delegates at the final session, on Saturday, and given a unanimous endorsement; the President being at the same time authorized to appoint a special committee to set this procedure in motion.

There are other interesting items in this Journal for which you may search leisurely; those mentioned above are selected only for immediate attention.

## Special Article.

### THE NEW GROUP LIFE INSURANCE AND GROUP ACCIDENT AND HEALTH INSURANCE, PROPOSITIONS ADOPTED BY THE MEDICAL SOCIETY OF NEW JERSEY.

(For some months past there have been rumors of a project under consideration for providing group life insurance to all members of the profession at rates that would be especially attractive.)

The Morris County Society discussed the plan at one of its meetings but, while approving the general scheme, found it impossible to take advantage of the offer because the Society's total membership was too small. The officers of the State Society were known to be actively interested in the question, and at least one of the larger county societies—Essex—was engaged in developing the plan. At the meeting of the House of Delegates of the State Society, at Atlantic City, June 18, the President requested Dr. Frank W. Pinneo to read the policies that had been submitted and to explain just what is offered to physicians who are members of this organization.

Upon completion of Dr. Pinneo's presentation, the Society voted to adopt the plan, both as to Life Insurance and as to Health and Accident Insurance, and *to invite all members to participate in this exceptional opportunity to procure a cheap and safe form of protection.*

The two policies as hereinafter described by Dr. Pinneo were negotiated by the Essex County Medical Society, but, as they have now been approved and adopted by the State Society, other counties having a membership less than 200 (minimum required by law) may enjoy the same advantages and privileges; *provided only that 75% of the State Society's members become subscribers.*

Any member may apply for either (a) Life Insurance, or, (b) Accident and Health Insurance, or, (c) both. Most members will probably desire to avail themselves of both privileges.

A special committee is being appointed, with a representative from each county, to promote subscriptions to the plan, and any further detailed information may be obtained from members of that committee.—Editor.)

#### The Group Life Insurance Policy.

The Prudential Insurance Company of America will insure the Medical Society of New Jersey in a Life Policy for \$5000 pay-

able to each member applying therefor, the Society holding the Master Policy and each applicant holding a Certificate containing all the particulars of the Contract. It is a One Year Term, Renewable, Participating Policy, payable to the Beneficiary designated by the applicant (and who has the right to change the beneficiary at will).

No Medical Examination is required.

Eligible for this Group Insurance are members of the Society in good standing at the time of issuance and as long as they continue such. "The insurance upon the life of any person so insured shall cease upon termination of membership in the Society," or, "when such person ceases to be actively engaged in the practice of medicine." The company agrees that names appearing in the Annual "Official List" of members as in good standing for the current year are thereby "Actively engaged in the practice of medicine".

"The Policy, except for non-payment of premium, is incontestable for the term issued."

On renewal, after the first year, "a grace of 31 days, without interest, will be allowed in the payment of premium".

"If any insured member, less than 60 years of age, while his insurance is in full force and effect, shall become totally and permanently disabled physically or mentally, from any cause whatever, no further premiums shall be payable on his account and payment of the insurance will be made either in one sum, or in 60, or less, monthly installments during 5 years."

"Any member who terminates his membership, and thereby his insurance, from any cause, may convert his insurance within 31 days, without medical examination, to an individual policy on some one of the company's customary forms (except Term insurance)."

New members may become insured, without medical examination (like the original members), if applying for the insurance within 60 days.

The annual premium for this policy is \$102.00. This is based upon the actual present ages of our members, and is the same flat rate for every member regardless of age. Each year the rate is determined by the then existing ages of the members of the Society and averaged so as to make one flat rate for all, as at first. Maintenance of the membership, as at the beginning, helped by dividends in such a Participating Policy, is all that will be necessary to keep the annual premium low.

To illustrate the advantages of this Group Life Insurance the premium of \$102.00 is about equal to the premium that an individual would pay for a Whole Life Policy if he were 29 years old; if he were 40, the cost would be



\$142.20; if he were 50, it would be \$211.65; and increasing with age.

To secure this policy it is necessary that we have applications from 75% of our Society members.

### **The Group Accident and Health Policy.**

*The Commercial Casualty Insurance Company of Newark* will insure such members of the Medical Society of New Jersey as apply therefor against

(1) "The effects resulting directly and exclusively of all other causes from Accidental Bodily Injury sustained during the life of this policy (suicide, sane or insane, not included)" and

(2) "Disability resulting from illness which is contracted and begins during the life of this policy."

The Principle Sum \$5000.

Weekly Accident Indemnity \$50.

Weekly Illness Indemnity \$50.

The principle sum is payable for Accidental Loss of Life, or, the Loss of Eyes, Hands or Feet.

The Weekly Accident Indemnity of \$50, for 52 weeks, is payable—"if such injury alone shall disable the insured from performing any and every duty pertaining to his occupation."

One-half of the Weekly Accident Indemnity, or \$25, for 26 weeks, is payable "if such injury alone shall, commencing on the date of the accident, or immediately following total loss of time, prevent him from performing one or more important daily duties pertaining to his occupation."

The Weekly Illness Indemnity of \$50 per week, for 52 weeks is payable "for the period during which the insured shall be totally disabled, and regularly treated once in every 7 days by a legally qualified physician, other than himself, solely by reason of such illness".

One-half of the Weekly Illness Indemnity, or \$25.00, for 4 weeks, is payable "if such illness alone shall not cause total disability but shall prevent the insured from performing at least one-half of his usual duties."

Indemnity will begin with the eighth day of disability, it being understood that the first seven (7) days are not covered.

Written notice of injury or of sickness must be given the company within twenty (20) days after the accident, or within ten (10) days after commencement of the sickness. In the event of accidental death immediate notice must be given.

Indemnity is payable at the end of each four

(4) weeks of disability and immediately upon termination thereof.

The Society will hold the Master Policy and each individual will have a Certificate containing the particulars of the contract.

Indemnities are payable to the insured member. Assignments are not valid.

Injuries, self-inflicted, or contracted in aeronautics, in a submarine, or in naval or military service in war or riot, are not covered.

New members are eligible, if applying within 60 days.

The company cannot cancel the policy with any individual insured under this group.

The rate is guaranteed for 1 year and will be renewed at the same rate if the experience on the group, as a whole, is satisfactory. Any other rate must be negotiated with the Society.

The annual premium is \$70 per member insured and it must be actually paid by the individual before his insurance is in force.

No Medical Examination is required.

To secure this policy it is necessary that 75% of our Society members subscribe.

## **RESUME OF PROCEEDINGS**

### **One Hundred and Sixtieth Annual Meeting MEDICAL SOCIETY OF NEW JERSEY Atlantic City, June 17-19, 1926.**

The annual convention of the State Society is over and has been voted a great success. Atlantic City is the most attractive possible place of meeting in the state and a large percentage of members attending bring along members of their families, so that the registration figure reached a total of 827, which is within 34 of being the top notch record; the actual number of physicians was within 13 of the recorded high point. The Scientific Program was of a very high order, unusually good in character, and all but one of the listed essayists put in his appearance and presented his paper; the missing one had been excused in advance of the meeting because of unavoidable detention at home. It was a noteworthy fact, also, that there was no over-lapping this year of business and scientific sessions; meetings were called to order practically on time, each event was disposed of in order and expeditiously, but without any suggestion of undue haste, and there was abundant time for deliberate discussion. The President gave universal satisfaction by the orderly and efficient way in which he kept everything moving and

prevented conflict between various features of the program. The Committee on Scientific Work should feel well satisfied with the success of their efforts and encouraged to continue the line of work now so well established; wisely selected topics, careful selection of persons to prepare papers upon such subjects, a well-balanced program that provided interest for all members—such a program must always be satisfactory.

Among those invited from outside the state, and who contributed important articles to the program, were Edward L. Keyes, Professor of Urology, Columbia University, College of Physicians and Surgeons, and Orrin Sage Wightman, Editor-in-Chief of the New York State Journal of Medicine. Dr. Keyes presented a very instructive paper on the radium treatment of bladder tumors, and Dr. Wightman, speaking on the pathology of cardiac degeneration, gave a marvelous demonstration, by motion pictures, of the action of the hearts of dogs and turtles; a more interesting and instructive demonstration of a physiologic process can scarcely be conceived.

At these annual gatherings, perhaps the greatest degree of interest centers in the proceedings of the House of Delegates, and this year was no exception to the rule. The reports of officers and standing committees were received with profound attention, and justly so, because they dealt with matters of vital import to each member.

The President's Address is published in full in this issue of the Journal and need not be abstracted here; suffice it to say that Dr. Donohoe not only produced a pleasing review of past accomplishments but indicated a policy and line of work for the near future which, if followed, will keep the Society busily engaged.

The Recording Secretary, Dr. J. Bennett Morrison, reported the present membership as 2267; the newly elected members during the year numbering 133. This increase in membership was considered very gratifying in view of its having occurred in spite of the raise in dues; "instead of sustaining any loss (from this cause) we have had an actual gain of 40 members and have now the largest membership in the history of our Society". Of the Component Societies, "17 show a gain in membership; 13 were 100% paid-up when the Official List went to press, and, for the first time in our history this included the larger counties of Essex, Hudson, Mercer, Passaic and Atlantic".

Dr. Morrison further reported on some investigations made by the President and himself and announced that at a later session a plan for Group Life Insurance, and Group Ac-

cident and Sick Indemnity, would be submitted for consideration. The plans are explained in a Special Article in this number of the Journal, as they were later approved by the House of Delegates.

The Executive Secretary's report dealt mainly with the campaign of educational work carried on during the past year, by radio, through the press of the state, and by lectures to clubs and other lay audiences; 38 such special lectures had been given upon the subject of "Longer Life Through Better Health", as part of the program for developing Periodic Health Examinations; a series of radio talks on "Keeping Well" had been broadcast from Station WHAR, and a new series is being prepared for future dissemination; all of these talks had been copied for release to the newspapers on specific dates, and the press of the state had been remarkably liberal in their publication. The Secretary outlined a public educational program for the ensuing year and asked for special moving picture equipment to illustrate his lectures to the public and to county societies. This program was endorsed later and the purchase of necessary outfit was approved. Members of the Society were requested to secure the Secretary invitations to address lay organizations in their respective communities on medical questions of public interest.

Attention was called to the Tri-State Conferences recently established among the officers of the State Medical Societies of New Jersey, New York and Pennsylvania, and it was reported that some good had already resulted from such meetings and much more is anticipated as some of the important state problems approach a uniform solution.

Coincident with his secretarial report and speaking as Chairman of the special committee to seek and gather in property for the State Society archives, Dr. Reik related the acquisition of an embryo library, through a bequest from the late Dr. William J. Burd, of Belvidere. A prize in this collection of books is a complete set of the Transactions of the Medical Society of New Jersey. Other small collections of books have been contributed by Drs. Charles D. Bennett, John A. Moore and C. R. D. Fisher, and, altogether we now own a library of several hundred volumes.

The State Board of Medical Examiners presented a record of prosecutions during the calendar year of 1925; showing 129 for violation of the Medical Practice Act; 8 for violation of the midwifery law; and 2 for violation of the chiropody regulations.

The Committee on Medical Defense and



Indemnity Insurance, Dr. Beling, Chairman, reported improvements made recently in the policy and an increasing percentage of members subscribing; the total number now holding such a policy being 795. This policy is apparently the most liberal one obtainable and constitutes the best protection the physician or surgeon can possibly obtain; every member of the Society ought to be availing himself of such protection.

Dr. McBride, reporting for the Welfare Committee, reviewed the legislative activities of that body, giving the details concerning each of the 20 medical bills before the last General Assembly and the fight that had to be conducted against several of these because of their vicious character. With reference to national legislation, he called upon all members to aid in the opposition to extension of the Shepard-Towner Act, and requested that each write to his own Representative in Congress and U. S. Senator to that effect.

It was recommended that the Welfare Committee for the coming year should continue the public educational program and endeavor, particularly, to develop public sentiment in favor of a medical practice act which shall provide a single standard of admission to practice of the healing art; requiring the same pre-medical education, and the same examinations in the fundamental branches of medical science, of all would-be licentiates.

"The time has come for us to recognize the fact that the public should recognize its obligation to safeguard itself through the enactment of proper medical laws, and that the medical profession should no longer bear the burden of a false implication that it is seeking selfish advantages, when it requests legislation that is really designed for the public benefit. We may anticipate that we shall have to continue our fight with the cultists while this period of education proceeds but we should take the initiative in this matter and should look forward to the establishment of legal provisions of such nature that anybody desiring to practice the healing art, no matter what he may call himself, shall be required to present certain qualifications. When some such universally applicable law is provided, we may hope for less trouble with faddists and charlatans, because their claims as to discrimination will have been deprived of even the semblance of support."

The Welfare Committee report was enthusiastically received and adopted.

The report of the Nominating Committee, submitted at the special hour set aside for that purpose, was unanimously adopted, and the

following named officers elected for the ensuing year: President, James S. Green; First Vice-President, Walt. P. Conaway; Second Vice-President, Ephraim R. Mulford; Third Vice-President, Andrew F. McBride; Corresponding Secretary, William J. Carrington; Recording Secretary, J. Bennett Morrison; Treasurer, Elias J. Marsh; Councillor of third district, to fill vacancy caused by death of Dr. Hawke, Dr. F. G. Scammel, of Trenton; Member Board of Trustees, B. S. Pollak; Delegate to American Medical Association, W. Blair Stewart.

## Medical Ethics.

### INSTRUCTION IN ETHICS.

In the three most recent issues of the Journal—covering the months of April, May and June—we have presented in serial form an excellent dissertation by Dr. Richard C. Cabot, of Boston, on "Ethics and the Medical Profession". Everyone of us may profit by the careful rereading of Cabot's instructive presentation of this subject.

Our attention was, however, first attracted to the importance of his article in the Survey-Graphic by its opening statement, that he "knew of no medical school in which professional ethics is now systematically taught", and, by a later paragraph which set forth the opinion that valuable as is the silent example of conduct, and the influence the preceptor may thus exert upon the pupil, such quiet teaching is not sufficient to meet the requirements of the average medical student. It was exactly those reasons, plus a knowledge of unpleasant things now and then occurring within the profession because of apparent ignorance of what constitutes ethical conduct, that led us to start this department of the Journal.

Originally, our idea was to present a systematic course of instruction in ethics but that proved not to be immediately feasible and the topics presented have been somewhat disjointed. Attention reverts now to the old plan, partly as the result of Cabot's confirmation of our views, and partly because we observe at this season of the year another large body of medical graduates, imperfectly instructed in this particular, being launched into the professional field. Perhaps we shall yet find it possible to establish something in the nature of a comprehensive, orderly series of discourses on ethical questions.

As further indicating the necessity for definite consideration of the topic, we would like to quote from the preface of Cathell's "Physi-

cian Himself", revised edition, 1922, which says:

"Some ships sail East, and some sail West,  
By the self-same winds that blow;  
It is not the gales, but the set of their sails,  
That determines which way they go."

"It is almost precisely the same on our Hippocratic sea, except that on this, many purblind beginners set their sails on some ill-chosen, misdirected, uncharted course which cannot possibly carry them to more than minimum success; while others, with even less medical judgment, with poor ships, poor sails, poor rudders and no compass, sail lazily along in this or that wrong direction; very often resulting in flat professional failure, or this or that variety of shipwreck; all from lack of a modicum of worldly wisdom.

"Were each and every one who starts on our sea either an Esculapian prodigy or a scientific Solomon, dextrous in medical navigation and sharp-eyed in steering, first to fame and then to fortune, this book would be entirely useless and might as well be tossed aside or thrown overboard. But, these natural born, tactful, medical geniuses are few and far between, and to the thousands of other medical sailors a concise and practical guide like this is extremely valuable."

Most of our readers have passed beyond the initial stages of the voyage but none of us has passed beyond the daily necessity for remembering the value of chart and compass in guiding our personal course, and all should keep more or less constantly in mind the importance of so governing professional conduct as to merit the approbation of one's colleagues and the respect of the more youthful associates.

## Esthetics

### SHALL WE HAVE A MEDICAL ART SALON?

(Copied from the Magazine "Medical Economics", January, 1926.)

Development of the artistic talents of physicians and surgeons would be of great benefit to the profession and to the world at large.

Noted sculptors had an intimate and thorough knowledge of anatomy. Michael Angelo dissected human bodies and numerous sketches of anatomical details show that Benvenuto Cellini was equally proficient and even

made instruments for surgeons. The physician has a good preliminary training for the plastic art.

Physical and mental states, human suffering as well as radiant health, have been portrayed by the great masters of brush and pencil such as Bellini, Rubens, Teniers, Holbein, Durer, Valasquez and Tiepolo.

The modern physician, on account of his deep understanding of pathology, if he have the manual skill, might also produce convincing and famous works of art dealing with the mysteries of life.

It is therefore suggested by MEDICAL ECONOMICS that there be organized a Medical Salon for American Physicians and Surgeons, on the lines of the Salon of Physicians in Paris. In such an exhibition could be shown sketches, paintings, sculptures, etchings, and, in fact, all types of art work executed by members of the profession; the merit of which could be crowned by suitable prizes or certificates. There are several ways in which such a movement could be conducted.

1. A county medical society could have an exhibition of the art work of physicians to which the public could be admitted by invitation or ticket.

2. An exhibition might be installed in some city where there is a deep interest in art, such as New York, Philadelphia, Chicago or San Francisco. From it certain smaller works could be chosen and sent throughout the country in a "rotary" or traveling exhibition.

3. The National Academy of Design, now celebrating its hundredth anniversary, or some other equally representative art body, could be asked to sponsor such an exhibition.

If this idea finds favor with the profession, MEDICAL ECONOMICS might undertake to launch the first experiment. We would be glad to hear from physicians and surgeons interested and also to receive photographs of their works, so that we may determine just what material might be available.

We hope traditional modesty will deter none from coming forward with both opinions and pictures.

(We have reproduced this article, in lieu of our usual contribution, because it will certainly be of interest to many of our members and because we hope some of them will contribute toward success of the movement.)

#### Might Oblige.

Chairman of Banquet: How long will you talk, old man?

Next Speaker: Oh, five minutes.

Chairman: You couldn't make it 10, could you? We want to clear the room for dancing!



## Observations from the Lighthouse.

Among industrial injuries none are more distressing in their consequences than those which involve the small bones of the hand, or the joints of wrist and elbow, yet we seldom see in medical literature anything relating to such traumatism and their treatment. By mere accident, we happen to have observed several timely papers appearing during the past few months which, considered together, constitute an interesting survey of the subject.

### INJURIES TO THE SMALL BONES OF HAND AND WRIST.

Under this title, Fred. Y. Cronk (J. Oklahoma Med. Assoc., 19:64, March 1926) emphasizes the importance of an x-ray study of the carpal area, especially in what are supposed at the time to be trivial injuries. There are many injuries in the carpal region considered trivial, and treated without any special support, or possibly splinted for only a day or two, which later present the picture of definite arthritis—the type sometimes referred to as “arthritis manus post-traumatica”. Where the injury is unusually severe, such an arthritis may become general through the carpal bones and wrist joint, even though immobilization is continued over a period of many weeks.

Cronk records 2 illustrative cases. In the first, a man 30 years of age sustained a Colles fracture of the right forearm with considerable jamming of the whole wrist area. A roentgenogram at the end of 8 days showed the fragments in good position but with considerable swelling present. As every effort to move the hand resulted in pain and increased swelling, immobilization was continued for a period of about 6 weeks, when gentle massage was instituted with passive motion of the wrist. Attempt to use the hand then caused much discomfort, and x-ray examination showed definite arthritis of the whole wrist area. There was no clear outline between the bones. Splint was replaced for 10 days, then changed to a lighter one, and gentle massage was applied to forearm and hand but there was occasional recurrence of pain and swelling, and it was not until 16 weeks following the accident that the patient could begin moderate work. Ultimately full power was regained within the extreme motions.

In the second case the diagnosis was “sprain of the left wrist”. The splint was applied to the forearm for about 12 days and then the patient attempted to use the arm, but swelling persisted and about one month after injury the patient came under the author's care. Roentgenogram showed arthritis involving the entire carpus and wrist; no fracture. The picture suggested an infectious arthritis with considerable bone erosion and marked clouding of all joint spaces, but on opening the eroded area no pus was obtained nor could any culture be produced. The splint was removed from time to time in an attempt to begin massage and light passive motion but each time swelling and discomfort would recur. It was not until more than 3 months after the original injury that these measures could be employed in even the gentlest manner. Dry heat in the form of electric light was instituted one week after the operation and after 3 months of this treatment the swelling and discomfort had practically disappeared but the stiffness persisted,

preventing flexion. At this time a glove was applied with a leather band around the wrist to prevent slipping and to afford attachment for finger-pull which would exert a constant traction and increase the finger flexion. The author believes that this treatment will eventually restore limited function and he calls attention to the fact that in this case an injury to the wrist, without fracture, developing an arthritis of the traumatic type, was exaggerated by too short a period of immobilization immediately following the accident. While too long a period of splinting is not good treatment in fracture cases it is essential to remember that too early manipulations may not only increase the swelling and discomfort, but may produce a similar condition to that resulting from lack of proper early immobilization, that is, a breaking down of the bony structure, giving fertile field for implantation of infection from some focal lesion.

### GREATER ACCURACY IN TREATING WRIST JOINT INJURIES.

Earl McBride (J. Oklahoma State Med. Assoc., 19:67, March, 1926) states that the use of the roentgenogram and an anesthetic is to fractures what asepsis is to open surgery, and that the surgeon who fails to employ both routinely is inviting trouble. No preoperative diagnosis is complete, without an x-ray examination. The patient and relatives must be shown the x-ray picture. Industrial disabilities are measured in dollars and cents, and permanent impairment of function often casts embarrassing reflections upon the surgical skill of the attending physician. When fracture of the radius is not found it is necessary to exclude the following injuries before a diagnosis of sprain is made: Fracture of the carpal scaphoid, dislocation of the semilunar bone, fracture of the trapezium, fracture of the first metacarpal, of the os magnum, of the semilunar, of the unciform, and fracture or dislocation of the pisiform. The surgeon responsible for the case should know enough about x-ray technic and interpretation so that he will not be dependent upon someone else for his information. Possibility of error will be reduced if the normal wrist is x-rayed in the same positions as the injured member. A lateral view with the ulna next to the plate, and an anteroposterior view with the palm down, are of course necessary in every case. It is particularly important to have the wrist exactly perpendicular to the plate and the x-ray tube centered squarely over the wrist when the lateral view is made. Two positions frequently used by the author are valuable in determining injuries to the carpal bones in that they lessen the confusion of overlapping shadows: (1) Pronation oblique, in which the lateral plane of the wrist forms an angle of 45° between the plate and the palmar surface, gives a clear outline of the trapezium, trapezoid, base of the first metacarpal and radial styloid; also an oblique view of the scaphoid which is essential in questionable fracture of this bone. (2) Supination oblique, in which the lateral plane of the wrist forms an angle of 45° between plate and dorsal surface, clearly revealing the head of the ulna pisiform and cuneiform bones.

In reducing a Colles fracture it matters little what technic is used; the important thing is to be certain that reduction is complete, and here again one must insist on the x-ray examination. Routine technic in the author's practice is as follows: After preliminary study of the clinical and x-ray manifestations the patient is anes-

thetized upon the x-ray table. When reduction is believed to be complete it may be viewed by the fluoroscope and, if satisfactory, splints applied while fragments are held in place. Lateral and anteroposterior x-ray views are again made after splints are applied for the purpose of a permanent record. One should not be satisfied until the x-ray picture shows normal lines of contour, not only in respect to overriding of fragments but particularly in respect to rotation of the lower fragment. Exaggeration of the deformity while making traction is the secret of success in bringing down the lower fragment. When the patient complains of pain at the end of 24 hours there is something wrong. The cause should be ascertained and removed even if the patient must be anesthetized again and the fragments replaced. It has been observed that in nearly every case of stiffness and permanent disability there is history of undue swelling and pain. That in fracture of the carpal scaphoid bony union is rarely obtained is due possibly to the fact that diagnosis is seldom made early enough to insure immediate immobilization. Another error is the common practice of relying upon adhesive plaster strapping in what is thought to be only a sprain of the wrist, when 10-14 days immobilization is much safer practice. Where the carpal semilunar is dislocated it can usually be replaced by closed manipulation within the first few days after the accident. At the end of 3 weeks it is almost impossible to replace it even by open operation, because of adhesions. It can be replaced by dorsal incisions but removal is better accomplished by incisions made along the ulnar border of the palmaris longus. Where fracture of the scaphoid and dislocation of the semilunar occur together the best treatment is removal of the semilunar and proximal fragment of the scaphoid, unless immobilization can be promptly made. A variable amount of disability is the rule after removal of the carpal bones but the gain in function and relief from pain are usually sufficient to justify the operation.

#### FRACTURES ABOUT THE ELBOW JOINT.

A large proportion of the injuries involving the upper extremities are fractures in and about the elbow joint. As the results obtained in the treatment of these injuries have often been most unsatisfactory, a study was undertaken by Drs. Ritter, Lasher, Wurtzel and Goldblatt, of the New York Post-Graduate Hospital, (*J. A. M. A.*, 86:680, March 6, 1926) to determine the results of a treatment instituted there. Of the 150 unselected consecutive cases treated from 1920 to 1925, only 52 were successfully followed up for a period of a year or more after discharge. The causative agent in all these cases was violence; the majority were seen within the first week but in many instances 2 weeks had elapsed since the date of injury. Sir Robert Jones' "golden rule of treatment" was routinely adopted, the elbow being fully flexed and the forearm supinated, with the single exception of fracture of the olecranon, which requires full extension. The authors agree with Jones that practically the only means of complete reduction is a combination of complete flexion of the elbow with downward traction of the forearm, and that any case not lending itself to this method requires open operation. If the limb is then bandaged in complete flexion with the forearm supinated, i. e., with the palm toward the shoulder, a good result in every case of simple, uncomplicated frac-

ture is practically assured. In cases of overriding, traction—slow, steady and sustained—on the lower fragment must be made before flexion of the elbow is carried out. The flexion position is maintained by a figure-of-eight bandage placed about the forearm and arm in such a way as not to encircle the limb. After close observation for 2 hours, because of the possibility of increased swelling, the patient is instructed to keep the fingers moving and to watch for cyanosis and contracture. At the end of 2 days the dressing is removed, the joint massaged and the forearm extended to an angle of 90°, and flexed to an acute angle while the fracture site is firmly held. The dressing is reapplied with the joint acutely flexed and this treatment is continued on alternate days, the angle of flexion being made less and less acute, until on about the tenth day dressings are discarded and the arm carried in a sling. From this point the patient is made to move the elbow twice from a right angle to an acute angle, several times daily, by active motion of the forearm. Massage is given daily for a fortnight and then at longer intervals until the elbow can be fully flexed and extended. Obese persons do not lend themselves readily to this form of treatment and usually require immobilization of the elbow in flexion at a right angle.

In calculating the end-results of this study of 52 cases, the authors have followed the method of rating as described by Moorhead, who, on a basis of 100% for perfect result, allows 60% for function, 20% for contour and 20% for union. After more than 2 years since the date of injury the rating in these cases was 51% for function, 18.7% for union and 16% for contour—a total average end-result of 86.4% restoration. In 12 of the total number of cases the result was perfect; 18 presented an exaggeration of the normal carrying angle; 4 showed loss of the carrying angle; 2 had complete loss of function and 16 exhibited perceptible thickening about the joint but no functional limitations.

Experience teaches these observers to believe that: (1) Early motion and massage are conducive to early functional restoration. (2) The farther away from the joint the fracture exists, the less likelihood there is of ankylosis; the closer to the joint, the greater the tendency to excessive callus. (3) Obese patients are not easily amenable to this form of treatment. (4) Displaced fractures of the head of the radius require open correction when the fragment interferes with joint function; i. e., acts as a foreign body in the joint. (5) Nonunion at the elbow does not occur except in avulsion fractures. (6) Certain cases, no matter what the type of injury, show poor end-results. (7) Traction, when needed, must be slow, steady and sustained. The duration of traction is dependent on (a) duration of fracture, (b) extent of overlapping, and (c) the musculature of the patient, the purpose being to "set" the muscles and allow the fragments to align. (8) Acute flexion for fractures about the elbow joint (olecranon excepted) is the treatment of choice. (9) The earlier the reduction, the better the end-results.

#### DIATHERMY IN TREATMENT OF BONE AND JOINT INJURIES.

The use of diathermy in the treatment of fractures is strongly recommended by F. W. Ewerhardt (*J. A. M. A.*, 85:1111, Oct. 10, 1925). Upon the basis of 10 years experience and 70,000 treatments given in the Physiotherapeutic Depart-



ment of Washington University School of Medicine, he asserts that diathermy unquestionably shortens the period of convalescence; that it is a valuable measure in at least partial control of pain, spasm and swelling, and contributes, therefore, materially to a favorable functional end-result. Diathermy is a safe heating procedure which can be localized in deep seated tissues at will; the degree of intensity may be satisfactorily regulated by means of suitable electrodes of varying size, properly applied, and augmented by the coöperation of the patient. The source of diathermy is a high frequency current of high voltage and relatively low amperage. The strength of the current used may be any part from 100 to 3000 milliamperes. The alternations or oscillations may range from one-half to two million per second, and are so far removed beyond the point at which human tissue responds, either by muscular contraction or by electrolysis, that the result is a conversion of the electric energy into heat energy. For these reasons it is not correct to speak of diathermy as an electrical treatment per se. Electrical treatment, as such, is always accompanied by a nerve response, muscular contraction or chemical reaction. This alternating current, which is frequently known as the d'Arsonval current, is bipolar; that is, 2 electrodes are required, while the intervening tissue completes the circuit. The current is slowly increased to a point just beyond tolerance, following which it is diminished to a point at which the patient will feel nothing but a comfortable warmth of the part treated. This procedure is known as medical diathermy; it is not destructive of tissue and is always within physiologic limits. By means of different types of electrodes and a change in the relation of voltage and amperage, the tissues may be so heated as to bring about destruction by desiccation or fulguration—a form known as surgical diathermy, and not considered in relation to this subject.

In discussing the physiologic effect of different forms of heat, the author notes that the conductive type which is produced by contact with a heated body, warms the tissues layer by layer. The immediate effect is a vasomotor dilatation followed by a venous stasis and frequently by free perspiration. The heat, however, penetrates barely beyond the dermis, for here the abundant vascular system dissipates it to other parts of the body. Wherever a relaxation of the superficial tissues is desired, this form of heat is indicated. The action of radiant light and heat for localized purposes is much the same as that of conductive heat, except that the light rays possess a definite power of penetration and are then converted instantly into heat, although here also a considerable quantity is carried off by the blood stream. Because of the ease and convenience of this method the modern 1500 watt lamp is in popular demand. This apparatus is arranged in the shape of a parabolic globe, which causes the rays to be directed parallel to each other, thus avoiding a focal point and lessening to a minimum the possibility of a burn. By means of diathermy, however, a method is afforded of heating the deep-seated tissues that can be obtained in no other way. In the earlier stages of treatment for fracture this heating procedure is of immeasurable value in combating swelling, pain and spasm—3 factors which interfere materially with progress. Not only does the edema influence fibrositis but the increased tension on the sensory nerves causes more or less pain, which in turn is responsible for muscular

spasm, and spasm interferes with efforts to reduce the fragments. It is an established fact that heat increases the arterial flow as well as the return circulation, thus bringing quantities of fresh blood to the part and carrying away excess accumulation of debris. In fractures, sprains, dislocations, subacromial or subdeltoid bursitis, and allied joint injuries the sedative warmth of diathermy imparts a feeling of comfort keenly appreciated by the patient. It promotes the absorption of exudations and relieves the intercellular tension.

In an article which confirms specifically much of the foregoing, Charles R. Brooke (Physical Therapeutics, 44:217, April, 1926) notes that the application of diathermy may be either sedative or stimulative. In the former type a long continuous, steady heat is driven through the affected area, usually to the tolerance of the patient. The current is stepped up from and down to zero very gradually allowing 5 minutes to reach the maximum and 5 minutes to be reduced to zero. The average duration of treatment should be at least 20 minutes, in some cases longer, but never shorter.

The stimulative type of diathermy is much less frequently used, being chiefly indicated in promoting callus formation in recent fractures, in sluggishly healing fractures, delayed union, and in gunshot wounds where there is loss of bone substance with partial union or nonunion of fractures. In this form of treatment the current is stepped up rapidly by quickly opening the sparkgap, and reduced abruptly by rapidly closing the sparkgap; the object being to stimulate and irritate the bone substance by short intensive streams of current to produce osteogenesis. The amount of current and duration of application should amount to only about one-half the time and dosage of an average sedative application.

Emphasis is laid upon accuracy of technic at all times, and upon the proper selection and sequence of modalities employed. The best electrode material for diathermy applications is a composition of lead and block tin, 50% of each, 22 gauge, known as Crooke's metal, that can be cut to fit any part treated. The best clips to connect rheophores to the d'Arsonval binding posts are of the Fahnestock type. The soaping of the electrodes with warm water and a similar preparation of the skin over the part to be treated should be carefully attended to. It is essential that electrodes make accurate contact and fit in perfect coaptation over bony and other irregular prominences so as to prevent jumping or arcing of the current from the edges of the electrode to the skin. The crossfire method of diathermizing joints has been used by the author with justifying success, especially in complex kneejoint injuries. It must always be remembered in the application of electrodes for diathermy that the smaller active electrode is placed over the site of greatest disability, with the larger or inactive electrode diametrically opposite.

In one of the two cases cited by Brooke to illustrate the wide range of conditions in which diathermy is effective, the patient was referred for physiotherapy 16 months after an injury to his neck in a wrestling bout. Examination revealed a well built man of 36, wearing a Thomas collar around his neck. With collar removed, head and neck were rigid and any attempt at passive motion caused severe pain. Diagnosis was old compression fracture of the fourth cer-

vical vertebra with osteoarthritis of the bodies of the third, fourth, fifth and sixth cervical vertebrae, and ulnar pressure neuritis affecting the right upper extremity. The treatment prescribed consisted of diathermy for 30 minutes daily, with the smaller electrode placed over the fourth vertebra, followed by massage and light exercise to the cervical region of the spine, this in turn followed by Oudin high frequency, a nonvacuum electrode being used along the right ulnar nerve. Reëxamination at the end of a month showed improvement—less pain, less muscle spasm. The patient was able to sleep without the collar. The size of the electrode was increased to cover the third, fourth, fifth and sixth cervical vertebrae and treatments were given only on alternate days. Four months later the patient had dispensed with the collar, diathermy was continued, massage replaced by mechanical vibration with the double prong vibrator to all the affected intervertebral spaces; also to muscle of the shoulder and arm with the disc vibrator. Assistive, resistive, active and passive exercises were continued, also high frequency with the nonvacuum electrode to the upper right extremity. At the end of 6 months after treatment was instituted the patient was free from pain; the x-ray picture showed less spurring of the bodies of the vertebrae and motion of the neck was complete in all directions.

The patient in the second case was a man 29 years of age, who was referred to the Physiotherapy Clinic for treatment November 8, 1922. The right axillary glands were palpable and there was extensive cellulitis of the entire forearm with 4 draining sinuses, resulting from incisions for cellulitis with abscess formation. The forearm was swollen, painful, red and hot. Bacteriologic culture showed a pure strain of *Staphylococcus aureus*. Roentgenogram showed, at the junction of the upper and middle thirds of the right radius, a thickening of the diameter of the bone with increase in the density of the medulla, periosteal irregularity, and thickening with cortical destruction of the inner aspect and evidence of sequestrum. The case was one of acute cellulitis of the right forearm superimposed upon a chronic osteoperiostitis of the middle third of the right radius with 4 draining postoperative sinuses in situ. Daily treatments were instituted consisting of diathermy, by the cuff method, cuffs being placed below and above the affected area for 20 minutes; also radiant light and heat (1500 watt blue bulb) for 20 minutes over the same area, this to be immediately followed by intensive local ultraviolet rays from the air cooled lamp, starting at 24 in. distance for 3 minutes and increasing to a third degree erythema reaction; ultraviolet ray local compression with special quartz applicators to sinuses, all discharge being removed before treatment; this whole program followed with a general tonic ultraviolet ray for systemic effect. Reëxamination December 2, showed improvement and the treatments were changed to every other day. By January 6 the cellulitis had cleared up and the soft parts were normal; 2 of the draining sinuses had healed. Attention was then directed to the bone pathology of the radius. As the patient refused operation diathermy was continued, given directly through the affected area of the radius; local and general ultraviolet irradiations were continued. On March 23 there occurred a spontaneous expulsion from the larger sinus tract of a sequestrum measuring about  $\frac{5}{8}$  by  $\frac{1}{4}$  inch. By April 5, the draining sinuses had firmly healed and the functional use of the extremity was com-

plete with a normal grip. The roentgenogram showed slight irregularity in the outline of the right radius at its midportion. The patient received calcium lactate 5 gr. 3 times a day during the last 4 weeks of treatment.

In the light of these illustrative cases, the author believes diathermy to be the treatment of election for the relief of trauma and disease of bony structures.

## In Lighter Vein

When you think the door to a successful future is closed against you, the ivory knob that holds it shut isn't on the door.—(The Kalends.)

The present rate of apple consumption in this country has risen to more than 1,500,000 barrels a month. The medical profession, however, is carrying on with determined cheerfulness.—(Judge.)

### Revived.

There are all sorts of ways of putting things, and some sound much better than others. For example, there is the case of the man of whom Lord Coleridge used to tell, whose father was hanged for highway robbery. Some one asked him how his father died.

"Sir," said he, "he fell from a scaffolding outside Newgate while he was talking to a clergyman."—(Youth's Companion.)

### Pedestrian Geometry.

Pedestrians equal to crossing Columbus Circle are equal to anything. (See note below.)

A pedestrian is the sum of his remaining parts.

Definition: Traffic is a variable constantly approaching the limit.

A pedestrian running at right angles to a motor car is parallel to the street at the point of intersection.

To describe a parabola: Dash into traffic with your eyes shut.

A motor car tangent to a pedestrian is a daily spectacle.

Problem of computation: The distance from curb to curb is 64 feet. How long must a 6-foot pedestrian wait before making up his mind to risk his life?

A motor car on the hypotenuse of a pedestrian is more painful than a motor car on either of the pedestrian's sides.

Note: Columbus Circle, already New York's best-stocked pedestrian preserve is being widened by twenty feet. As the driving area will be increased by several thousand square feet, mathematicians have announced that a pedestrian's chances of getting safely across will be reduced to

$$m(2R + \text{Luck})$$

13+Central Park  
—(W. T. in Life.)

Mrs. Gray—You're hoarse this morning dearie.  
Mrs. Wray—Yes. John came home disgustingly late last night!—(Tit-Bits.)

"Am yo' program full, Manney?"

"Hell, no, takes mo' 'n a sandwich 'n coupla olives tuh fill mah program!"—(Brown Jug.)



## Current Events.

### THE ISOLATION OF SCARLET FEVER PATIENTS.

By Henry B. Costill, M.D., Director,  
New Jersey State Department of Health.

Recently some practicing physicians have questioned the necessity of the arbitrary 30 day minimum isolation-period for scarlet fever named in the State Sanitary Code, because in mild cases and those treated promptly with adequate doses of scarlatinal antitoxin the infectious period may be presumed to be much less than the stipulated time. Other evidence of disapproval of the legal minimum isolation-period for scarlet fever is found in the annual reports of local health boards to the State Health Department, for these reports indicate that the period is not enforced by some of the local health officials. Admitting the assumption that some cases of scarlet fever may become noninfectious in less than 30 days after the onset of the disease, we believe that at the present time it would be unwise to shorten or otherwise alter the legal minimum period of isolation as set forth in the State Sanitary Code.

The majority of persons convalescing from recognized scarlet fever become noninfectious in about 30 days, hence this time has been adopted as the minimum period of isolation by most state health departments, including New Jersey; but some departments make the quarantine period as long as 6 weeks. No arbitrary minimum period of isolation can be entirely safe, for there are many records of cases held in quarantine for 6, or even 10 weeks, which have carried the disease into the home after release from the hospital.

As there is as yet no practical laboratory test to determine when a patient is no longer a carrier of the scarlatinal streptococcus, health officials have no alternative but to decide upon an arbitrary isolation-period which, in the light of past experience, affords protection to the public in the great majority of cases and at the same time does not work injustice to the quarantined individual. These factors influenced the New Jersey State Department of Health when it enacted that part of Regulation 34, Chapter VI, of the State Sanitary Code, relating to scarlet fever, which reads:

"The minimum period of isolation of persons affected with the disease hereinafter named shall be as follows: \* \* \* Scarlet fever, until 30 days after the onset of the disease and until all abnormal discharges from the nose, ears, throat, or suppurating glands have ceased."

It is highly important that there be a uniform minimum period of isolation for scarlet fever throughout the State of New Jersey, and this regulation should be enforced by all local health departments. The wisdom of a uniform practice should be evident to practicing physicians as well as to health officials, for if cases are released in one jurisdiction after a short isolation period whereas in a neighboring municipality the legal time limit is enforced, there will be much dissatisfaction. The patients and their attendants in the latter communities will feel that they are unnecessarily restrained, and both physicians and health officials will be embarrassed in the control of quarantined pa-

tients. This dissatisfaction would become particularly acute if the length of isolation were left to the judgment of the attending physician, for not only would patients compare the length of their enforced isolation with the procedure in lax communities, but patients would compare unfavorably the periods of isolation imposed by the same physician among the various cases in his practice. We know now that in diphtheria the severity of infection does not necessarily govern the length of infectivity, so in scarlet fever the attending physician is not justified in concluding that a case has become rapidly non-infectious merely because the infection appears to be a mild one.

If, and when, a satisfactory laboratory diagnosis of freedom from infection can be established, then the change of the State Sanitary Code to meet the new conditions will be justified. Until that time comes, the State Department of Health has no alternative but to require local health officials to enforce the present regulations of the State Sanitary Code and to urge practicing physicians to coöperate with the local health officials in this enforcement.

### REMARKS ADDRESSED TO THE REPORTERS OF COUNTY MEDICAL SOCIETIES.

(At the luncheon given to Secretaries and Reporters by President Donohoe, Hotel Traymore, June 17, 1926.)

The President of the Medical Society of New Jersey, Dr. Lucius F. Donohoe, entertained the Secretaries and Reporters of the County Medical Societies at a luncheon in the Hotel Traymore, Thursday, June 18. Of the 21 counties, 13 were represented by one or both of such officers. Those present were: Edward Uzzell and Joseph H. Marcus, of Atlantic; George Tracy, Burlington; Thomas B. Lee and Grafton E. Day, Camden; Eugene Way, Cape May; H. Garrett Miller, Cumberland; Frank W. Pinneo and Alfred Stahl, Essex; Ralph K. Hollinshed and Henry B. Diverty, Gloucester; A. Dunbar Hutchinson, Mercer; George H. Lathrope and Marcus A. Curry, Morris; George W. Lawrence, Ocean; William H. James, Salem; George W. Horre, Union; L. C. Osmun, Warren.

At the conclusion of the lunch, Dr. Donohoe expressed his appreciation of the coöperative efforts of the county society officers to successfully carry on the State Society work, and urged them to continue to labor for the interests of the medical profession locally and at large.

Dr. Donohoe called upon Dr. J. Bennett Morrison for some message to the Secretaries, and Dr. Morrison responded in his usual happy way of making hard labor look attractive. He first called attention to the necessity for promptly reporting to the Recording Secretary the names of newly elected members, and the importance of having all names correctly spelled, first name in full, and addresses correctly given. The reasons given for requiring promptness and accuracy were: That the membership files may be kept up to date and correct in every particular. To avoid repeated or continuous correspondence between the state and county secretarial offices. To avoid multiplication of correspondence with the Secretary of the American Medical Association; because when a name is dropped from the A. M. A. mailing list it requires the writing of 6 letters to secure reregistration. Correct names, initials and addresses are essential in supplying information for the Medical Defense Insurance policies,

and for publication of the annual membership list, and for the Journal mailing list. The Official List is to be published hereafter as a supplement to the March Journal; that is at least 1 month earlier than heretofore. This requires the payment of all dues before February first.

Dr. Morrison expressed his gratification at the showing of the county societies during the past year, especially at the number (13) that were 100% paid-up when the Official List was sent to the printer. The county officers should see to it that all dues are paid promptly and that returns to the State Society officers are made with equal promptness. A great injustice is done when dues are not promptly paid or forwarded. The name of the member not reported as paid-up will not appear on the official membership list; his membership in the A. M. A. is automatically dropped; delivery of the State Medical Journal and of the A. M. A. Journal is stopped—delayed in case of new members and suspended in case of delinquents; indemnity insurance is denied until membership is clearly reestablished. Correction of any or all of these factors requires much correspondence and not a little expense, and tends to engender ill feeling where none should exist.

Dr. Morrison emphasized the fact that interest in and the accomplishments of any county medical society are in direct relationship to the activity of its secretary; it is up to this officer to direct the activities of all the members, to arrange for frequent meetings, to prepare attractive programs, to force the members into the habit of regular attendance, and to employ any and all means of stimulating interest in local, state and general medical problems.

The President then called upon the Editor of the Journal to address the Reporters of the Component County Medical Societies.

Dr. Donohoe has very kindly afforded the Editor the privilege of speaking to the Reporters of the County Medical Societies concerning the importance of their work. Dr. Morrison has just told you something of the functions of the County Society Secretary and the opportunities for service enjoyed by that officer. The retiring President of the New York State Medical Society recently made a statement that any medical society is just as good as its Secretary, neither better nor worse, and we consider that an acceptable statement of fact; our own State Society presents us with an illustrious example. However, we would like you to understand that a good Reporter is scarcely less important to any society. The President and Secretary, and the Program Committee if there be one, may function perfectly in providing for meetings but if there be not an efficient reporter to record and disseminate an account of the proceedings, the effect of those meetings will be of a limited character, restricted to those who were present, whereas publication of the proceedings would confer benefit upon a countless number of other possibly interested persons. In our opinion, it is highly important that every County Medical Society should have a capable, energetic, progressive Secretary and an equally capable, wide-awake and active Reporter.

The County Society is the organization unit in composition of the state and the national society. For organization purposes, it performs a double function. It may be the place where ideas originate, are first presented and tried out, because members will speak more freely among their colleagues than before an audience containing many strangers. It is also the place for the

ultimate distribution of decisions and pronouncements passing downward from the national or the state society toward individual. Therefore, action taken upon questions of either class should be recorded and information regarding that record should be broadcast for the benefit of the entire medical profession.

One of the chief objects of a state medical journal must be the dissemination of knowledge concerning the transaction of the county societies, which means in turn the opinions and views of individuals, or groups of individuals of fundamental importance to organized medicine.

This promulgation of news from the county groups should cover not merely questions of scientific interest, but economic and social matters as well. For instance: The Morris County Society recently made a critical study of the Visiting Nurse Problem, and we published its report for the benefit of other districts; the Monmouth County Society has dealt with the question of periodic health examinations in a very methodical way and other counties may well learn something from that investigation and the plan submitted; Atlantic County constantly supplies us with detailed reports of the work and the workings of the largest hospital within its territory, an institution that serves as a fair model for county, town or small city hospitals.

Now, the Journal should be in some respects a mirror and should reflect the accomplishments and the desires of the members of the profession of this state; and this relates to all matters that concern the life of the medical man. This material can be best collected through the county society reports and we think there should be a healthy rivalry among the counties as to which can make the best showing. Do not think that because you represent an organization small in numbers that you are handicapped in this race. We have been impressed by the fact that our best reports have not been received from the largest counties. Look over your Journals and you will discover that the most interesting and most valuable reports have come from some of the smaller societies; and we are not measuring these reports upon their literary merit but upon the content of matter important to the medical reader. The fear that our remarks might be interpreted as presenting invidious comparisons restrains the desire to exhibit examples of good reporting; but we suspect that most of you know whether or not you are presenting adequate reports of your society meetings. In order that there may be a clear understanding as to what is expected of a reporter, let us submit for consideration two questions: what are the duties of a reporter, and, what constitutes a good report?

In answer to the first question we would say that it is the duty of a reporter to take notes of all proceedings during any given meeting of the society and to prepare immediately after the meeting a succinct report of those proceedings for publication in the society's official organ. We would like to emphasize the point that this report should be made immediately after the meeting, certainly within 24 hours, because the report will be a better one if made while the facts are clear in the reporter's mind, because the value of the report is directly proportionate to its timeliness and freshness when published, and because it is easier for the reporter to prepare his summary at that time than it will be at any later period; the longer he delays the more difficult becomes his task and the less accurate his record. Furthermore, it is his duty to re-



port medical developments occurring in his district between meetings of the county society, and in this connection we would point out that a duty of special importance is that of immediately reporting to the Journal the death of any member of the society. Do not wait for the appointment and the report of a Resolution's Committee; that report can be submitted later; let us have a written statement or a newspaper clipping at once. A report in the State Journal is the last tribute of respect that we can pay to a departed brother and that tribute should be paid promptly.

As to the second question, if we might offer a sketchy outline for a routine report, we would suggest that it comprise the following features:

(1) A paragraph stating the time and place of meeting, name of the presiding officer, and number of members present. This may be elaborated by the names of the guests or visitors present, and in some instances, where the society is a small one, the names of the members might be given.

(2) Record of any business transacted: Election of officers, with correct names and addresses of those chosen; election of new members and nomination of new members, with correct names and addresses in both instances; reports of standing committees and explanation of any important features of those reports; reports of any special committee, in the same detail; report of any new business introduced. When action has been taken upon any question that might interest the profession of the state as a whole, the report of such action should include not only the decision but some account of the reasons given in arriving at that decision; members of the State Society residing in other counties would like to know why you favor or oppose certain projects and the county society reports constitute one means of effecting harmonious universal action.

(3) Record of the scientific program. When an original paper has been read and the reporter believes it to be of sufficient interest to justify publication, he should endeavor to secure it for the State Journal, to be submitted along with his report of the discussion it brought out. Should the author have decided to publish his work elsewhere, the reporter should take notes so that he can include in his report a brief abstract of the paper. Likewise, when a subject is presented informally, without a set paper, the reporter should take notes and prepare an abstract presentation of the matter. Such abstracts need not average more than 300 words in length and should present the salient points made by the essayist and the arguments in support of his views. The Journal wishes to present all of the work done by New Jersey physicians and will give preference in publication to papers written by members of the State Society, but is also glad to secure worthy papers presented by visiting physicians from other states.

(4) Finally, while we will not refuse to accept hand written reports, we desire to express a decided preference that all reports, and all matter for publication in the Journal should be typewritten and double spaced. Do not be afraid of making your reports too lengthy; the Editor will use his blue pencil with full liberty.

Dr. Marcus A. Curry, on behalf of the Secretaries and Reporters, gave expression to their appreciation of President Donohoe's entertainment of the day and his uniform courtesy to them and interest in their work throughout the year,

and offered a special vote of thanks for all of this. The motion was second by many voices and as Dr. Morrison put the question all arose to a standing vote.

## Communications.

### A VISIT TO THE LAHEY CLINIC.

(Special Letter from John Hammond Bradshaw, M.D., F.A.C.S., Orange, N. J.)

My long projected visit to the Lahey Clinic was realized May 15, 1926. I was most fortunate to secure as a fellow traveler Dr. W. Wayne Babcock, of Philadelphia, whose company added greatly to the pleasure of the trip. Having received from Dr. Lahey a telegram shortly before starting, that his limousine would be waiting for us at 8 a. m., at the Boston dock of the Eastern Steamship Company, it was slightly disconcerting to find on arising at my usual hour of 5 o'clock that the good ship "Boston" had, because of a thick pea-soup fog, been anchored in Buzzards Bay at the mouth of the Cape Cod Canal for over 2 hours; and it was not until 12 o'clock noon, when the fog lifted, that we were able to proceed. We found we had spent a good part of the night directly opposite the former home of Grover Cleveland whose affection for Buzzards Bay was much greater than ours. This feeling was intensified by the knowledge that Lahey goes into action at 8 o'clock and that under even forced draught the most we could expect of the ship was to arrive at Boston at 3 o'clock in the afternoon.

Arriving at the Clinic at that hour, we found this great surgeon ready to receive us and we were escorted at once into his inner office. Lahey is a man in the early forties with all the alertness of a Howard A. Kelly. I have found most active workers have a pet hobby. Cragin's chief office adornments were scores of photographs of beautiful babies. Sir Berkeley Moynihan's, at Leeds, England, his books; Kelly's, his curios; Will Mayo's, the thousand-and-one pictures of his surgeon friends; Lahey's were dogs. The walls of his room were covered with pictures of dogs. His favorite breed, the English Setter, in action and out of action, looked down upon you from all sides while the dog in life itself wagged his friendly tail at you from beneath his chair.

Lahey's clinic is unique. It is the creation of Lahey. His half score associates show in every word and action their devotion to his ideals. I counted 8 tables, each with its typewriter, in the main office of his chief secretary on the main floor. It looks like work and the work surely has a business flavor. To this office the patient is first routed. If anything impressed most it was the human touch that was given to the desire to relieve the victims of a suffering world. A kindly spirit of devotion to the truest welfare of each case pervaded each worker to such a degree that one saw in the shining face of even the most suffering patient the glad hope and expectation of recovery and the relief that comes with success after a long or vain search for health and happiness.

Whether it was or not because the writer first saw the light of this world's day from the top of Bunker Hill, at least it is a fact that although but a brief visitor at the Clinic, I myself at once felt at home.

Lahey at about the age of forty had the extraordinary tribute of an offer to be full time pro-

fessor of surgery in the Harvard Medical School but he decided he could do his best work in other ways and now his every look and action, not to mention his results, shows his choice was a wise one! I have visited surgeons riding the crest wave of fashionable and lucrative favor whose annual incomes exceeded that of the President of the United States but whose faces showed an unhappy if not disturbed spirit within. Their consultation rooms were crowded with the over-rich, but their facial lines showed they were in the daily grind of a life that brought no compensating joy for the immense expenditures of overhead and physical and mental effort although the pecuniary returns might be the ransom of a king. For the antithesis one should look at Lahey!

As we had missed seeing Lahey operate because of our delayed arrival in Boston it was a little aggravating to be given the morning list which included many thyroidectomies and a miscellaneous assortment of other little things such as hernias and hysterectomies. But under Lahey's permission we were able to investigate the clinic proper and were escorted by the associates (Drs. Chute and Hamilton and others) over the Deaconess and the Baptist Hospitals where we had a very instructive afternoon examining not only the cases that had just been operated upon but others of more than ordinary interest, and the methods employed were explained to us.

But first let me add a word or two that will throw some light on the business side of the work of the Clinic. Dr. Lahey relies upon his efficient secretary to make all the financial arrangements with each patient. When he operates he does not know what the patient is paying for his work! And as about 40% of his private work is non-productive of cash, this is a rather strong statement. The patient, however, is not left in the dark for she is given a typewritten sheet as follows:

#### LAHEY CLINIC,

638 Beacon Street, Boston.

This is an attempt to estimate the total cost of the operation, merely for the convenience of the patient and in order that misunderstandings may not arise afterwards. It does not mean, however, that conditions may not come up which may increase these amounts. As hospital charges are made entirely by the hospital, our figures are but an estimate to help the patient approximate his entire expense. This is based upon the rooms reserved, and if different rooms are taken or if it is necessary that patients go into different rooms or beds, the charges will, of course, vary.

Hospital charges payable one week in advance.  
Bed.

Private Room.

Operating Room.

Anesthetist.

Pathologic Examination.

Basal Metabolism Examination.

Laboratory.

#### OPERATING FEE:

To be in.....Hospital at .....  
o'clock on.....  
Approximate Total.....

The chief secretary is a woman of great tact and unusual ability. She always has a heart-to-heart talk with each candidate for operation or, if that is not possible the patient's relatives or friends. The conversation runs, as I heard it, as follows: "You have come to Dr. Lahey's Clinic for help. It is a pleasure to him to help you but

you also must help him. As so many of his patients are unable to pay him you are expected to pay him his fee if you are able to do so. If you are unable to do so, you must tell him the reasons why you cannot pay. He will then make the charge fit your case and your circumstances. If, however, you make statements that he finds afterwards to be untrue (and he has his own exact methods of investigating your financial status) you will be the only sufferer. It will not be your surgeon." The charges are thus adjusted and known to the patient (and thoroughly understood) before further steps are taken. Now, can anything be fairer to the patient or more satisfactory to the honest doctor than this plan of procedure?

### THE GENERAL PRACTITIONER AS A SPECIALIST.

(An Open Letter from Robert A. Kilduffe, A.M., M.D., Director of Laboratories, Atlantic City Hospital.)

It has become somewhat the fashion nowadays to deplore the passing of the general practitioner and to envisage the day when his place shall be taken by the specialist and he becomes as much a relic of bygone days as the pterodactyl and the ichthyosaurus.

It is told—though the story, perhaps, is apocryphal—that at a society meeting one of the "old guard" heatedly proclaimed the umbilicus as the only part of the body not preëmpted by the specialist. But even this area was questioned by another on the ground that he had heard that there were naval hospitals.

After, and sometimes before, graduation the problem arises as to how the embryo practitioner shall best exert the privileges conferred upon him by his Alma Mater and the State Board. Shall he enter into general practice or shall he specialize and if the latter, how soon may the transformation be wrought?

For varied reasons it is inevitable that the specialties shall allure.

It will always be impossible for one man to know it all; there will always be those more interested, and thus better read and trained, in one phase of medicine than another and hence, inevitably, specialists; and it will likewise always be true that the best specialist is he whose particular ability is solidly founded upon a thorough, broad, and general training.

In addition, however, there will always be men who will form, as it were, a substratum devoted to what is called general practice.

The leaning of the young practitioner toward the primrose path of specialization as opposed to the often rough and laborious road of general practice is a result of several coöperating factors; among them the increased remuneration accruing from the particular ability presumed to exist, and the opportunity afforded to regulate one's time for work, study, and recreation. Too often it is assumed, however, that mere manipulative dexterity is a sufficient foundation upon which to erect a specialized reputation.

It is largely from the general practitioner that the cry of over-specialism arises and yet, to some extent, is not this tendency due in some measure to the indifference and even comparative lethargy of the general practitioner? After all, few patients know enough to bend their footsteps of their own accord toward the man best versed in their particular ailment. They have to be sent and, in the majority of cases, they must be sent by the



general practitioner. Not infrequently, however, it is not the first man, nor the second, nor sometimes even the third to whom they go who sends them. The first may be one who treats the leading symptoms, and hasn't time nor, perhaps, inclination to trace its source or origin. The second, perhaps, makes a more thorough examination but hasn't time for the new-fangled methods, laboratory examinations and the like. The third, more progressive, uses the laboratory methods, but "not being a laboratory man" does not bother to familiarize himself with their rationale or *modus operandi* nor appreciate the importance of this knowledge as assisting in the proper clinical evaluation of such measures. If the test is positive and agrees with the provisional diagnosis, well and good; if not, then what is wrong with the laboratory or the test?

The next man knows that the first step toward the successful handling of a patient and his condition is to find out, if possible, what is the matter with him, in a word, to make a diagnosis, and so he marshals to his aid all his powers of observation, his recollections of past experience, and then he examines his patient by one means or another, by laboratory tests carefully chosen and aptly applied, and from a judicious, careful, and keen summing up of all the data thus obtained he reaches his diagnosis. He it is who selects for his patients the particular treatment or the particular man best suited for the condition. In a word, he is really a specialist in diagnosis. He should be, he can be, and he must be if he is to reap from his work something more than a mere existence, if he is to be something more than a mere peddler of pills and lotions. It is to the general practitioner that the vast majority of ailing humanity first goes and it is by him and through his efforts, skill, and professional acumen that those requiring specialized skill ultimately reach their goal.

It is a source, at times, of perhaps justifiable irritation that the literature contains relatively numerous references to what the general practitioner should know about this or that; but is not the appearance of such papers *prima facie* evidence of some lack of appreciation of such data? Is it not possible that symptomatic treatment at times takes the place of a consideration of the underlying physiologic and pathologic aberrations responsible?

The interne, beholding with subconscious trepidation the insidious approach of the daily grind, too often looks for consolation and encouragement to the comforting cars, chauffeurs, and careers of the various chiefs of staff, and resolves to specialize. No general practice for him and so, with his eye on the heights, he overlooks the vital fact that the safest, sanest, and finest groundwork is a broad general training and experience. The responsibility attaching to general practice is enormous, for upon the ability to formulate a correct diagnosis and, at times, to do it quickly, may depend the future welfare and final disposition of the patient. In spite of himself, the general practitioner must be a specialist in diagnosis.

It is unfortunate that the average graduate is apt to carry away with him a disproportionate estimate of laboratory procedures in relation to the formation of a diagnosis and too little an appreciation of the importance of an understanding of the fundamental pathology of the condition. Too often is he inclined to study his patient solely through the laboratory. The value and especially the significance of laboratory findings depends primarily upon the acumen with which

they are selected and allotted to the particular case, and this, in turn, is largely dependent upon and proportionate to the degree of understanding of their mechanism and relation to the pathology.

The moral is obvious: Less attention to the disease alone and more focused upon the patient with the disease; less to the symptoms presented, and more to their underlying mechanism—in a word, the pathology; less haphazard employment of "tests", and more care in their interpretation; keener observation—gross and minute—and closer correlation of the results with past experiences; upon these foundations rests the scientific practice of medicine and from them develops the specialist.

## COMPENSABLE DISEASES TO BE REPORTED.

(Letter from the Commissioner of Labor.)

I am in receipt of a communication from the Consumers' League of New Jersey, in which they request the aid of the Department of Labor in obtaining for them accurate data and statistics concerning occupational diseases so frequently suffered by the workers of New Jersey.

Now that certain diseases are compensable under the laws of the State, it is my wish that this Society call the attention of its members to the urgent necessity of reporting all such diseases to the Department of Labor just as soon as they are recognized. I am enumerating the diseases that are compensable under the Compensation Act of the State: Anthrax; arsenic poisoning; poisoning by benzene, its homologues, and derivatives thereof; caisson disease; chrome poisoning; lead poisoning; mercury poisoning; phosphorous poisoning; wood alcohol poisoning; radium necrosis.

So that all those suffering with any of the above diseases may be accorded that measure of relief that is contemplated in the Compensation Act, it is necessary that the diagnosis be established early whenever that is possible, and that a report be made to this Department at the earliest moment, just the same as accidents are now reported.

My purpose in bringing this before the Medical Society is that physicians who are not already acquainted with the compensable character of these diseases may be in a position to aid their patients by reporting early these diseases.

It is the further wish of the Department of Labor that any other diseases that in the judgment of the physician result from the character of an employee's occupation be likewise reported, so that our Department may make a complete and thorough investigation, as we do in all occupational diseases that are now reported.

Yours very truly,

Andrew F. McBride, M.D.,  
Commissioner of Labor.

## MAIL DIRECTORY INFORMATION CARD PROMPTLY.

(A letter from the American Medical Association.)

During the month of June, every physician in the state should have received a Directory information card. Every one is urged to fill out and return the stamped card regardless of whether he or she has changed residence or office address.

This information will be used in compiling the Tenth Edition of the American Medical Directory, now under revision in the Biographic Department of the Association. The Directory is one of the

altruistic efforts of the Association and is published in the interest of the medical profession, which means ultimately in the interest of the public. It is a book of dependable data concerning the physicians and hospitals in the United States and Canada.

AMERICAN MEDICAL ASSOCIATION.

June 15, 1926.

#### **SOCIETY FOR THE RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN OF NEW JERSEY.**

Annual Report (May, 1926) of the Board of Trustees, Charles D. Bennett, M.D., Secretary

Another year has rolled around and again the society records its customary gains and losses. These things must be and while we occasionally lose a member by death or resignation, these deficits are always more than made up by new accessions.

We do not count the payment of a claim as a loss. Rather, we record it as a gain in that we have been enabled to be of some help to those in trouble and have done our bit in ameliorating the sorrows and worries that seem inevitable when the head of the family passes on.

We have recently parted with another of our oldest members, a worthy friend, a former trustee and a man who not merely existed but truly lived up to the very end of his life, and who, at 81, allowed his townsmen to elect him a Justice of the Peace for a term of six years. As his old friend and former associate, Dr. Rosecrans, writes: "It is fitting to recount the blessings we have received, but we have to also record the loss of one of our life-long and esteemed members, Dr. Wm. R. Fisher, of Swiftwater, Pa., Dr. Fisher was a highly respected and successful physician in Hoboken, New Jersey. He joined our Society on June 29, 1891. He was a Trustee of the Society for three years, 1898-9-1900. He retired from practice in 1902, at the age of 57 years and then settled in Swiftwater, Pa., where he died at the age of 81 years on March 28, 1926."

In addition to Dr. Fisher we must also record the loss of Drs. W. E. Cladek, Geo. Cobb, A. Dallas, G. H. Hahn, W. B. Johnson, J. D. Lippincott, W. H. Murray, J. P. Reilly, F. Steinke, G. L. Warren, W. P. Watson and L. Wolfstein; thirteen in all. Nine members were dropped from the roll for non-payment of assessments, and offsetting these, twenty-nine new members have been elected, leaving our present membership 484.

It is interesting in the way of confirming our belief that many of the delinquencies of our members are due to carelessness or forgetfulness, to note that one of our old members was dropped because of unpaid dues, but when he received his notice of this action, he promptly wrote, enclosing his check and stating that he wished to continue his membership. Of course he was re-instated, but his case well illustrates the importance of keeping assessments fully paid.

Our Permanent Fund now amounts to \$35,576.-38, and from the income of this fund has been distributed, during the year, to worthy beneficiaries, several hundred dollars. No unusual incidents have occurred to vary our usual business routine and it is a pleasure to report the continued prosperity of the Society, both as to membership and also as to its financial condition.

One of our members interested himself in a personal drive for new members and sent us ten

new names from one of the Northern counties. This was splendid work for the society. We should be very happy to see such efforts duplicated in other counties, especially in the Southern portion of the state where we are very poorly represented. One member in the south did, however, send in one new application, reporting also that he had brought the matter to the attention of his County Society, and for this action, we are very grateful.

As a reminder and as an assistance to solicitors, we are printing with this report, a blank application for membership, of which we trust many will come back to us with the appropriate filling out. It should not be hard to interest at least one new candidate. Why not try it and then "Watch Us Grow"?

### **National Medical News.**

#### **DO YOU FAVOR CONTINUANCE OF THE SHEPPARD-TOWNER LAW?**

In his report to the House of Delegates of the State Society, Dr. McBride, as Chairman of the Welfare Committee, stated that during the past winter advices had been sent to the Senators and members of Congress from New Jersey that the medical profession of this state is opposed to any extension of that law, and he further called upon individual members of the State Society to now communicate with their respective Congressional Representatives and Senators urging attention to this matter, action upon which is still pending.

Lest you be not familiar with the present status of the Sheppard-Towner Act and the effect of this sort of legislation on the part of the National Government, we deem it wise to reproduce herewith the salient points in Dr. Woodward's excellent report to the American Medical Association in session at Dallas, Tex., April 19-23, 1926:

#### **THE SHEPPARD-TOWNER ACT: ITS PROPOSED EXTENSION AND PROPOSED REPEAL.**

William C. Woodward,  
Executive Secretary, Bureau of Legal Medicine  
and Legislation of the American Medical  
Association, Chicago.

The term "Sheppard-Towner Act" is the popular designation for "An Act for the promotion of the welfare and hygiene of maternity and infancy, and for other purposes", approved Nov. 23, 1921. Exactly 6 months after the approval of this act, the House of Delegates of the American Medical Association adopted a resolution condemning it as "a type of undesirable legislation which should be discouraged". The act itself authorized appropriations to carry it into effect until June 30, 1927. If appropriations are to be made to carry it into effect after that date, it is necessary for the guidance of the federal budget makers and of the several state legislatures meeting in January, 1927, that legislation to that end be enacted at the present session of Congress. Bills for that purpose were introduced into the Senate and the



House of Representatives, as reported in the Journal (Protest the Sheppard-Towner Act, J. A. M. A., 86:421, Feb. 6, 1926) at that time, authorizing appropriations for 2 additional years. The bill introduced into the House was passed. In the Senate, the Committee on Education and Labor has recommended the passage of the House Bill, but recommended that the period of the proposed extension be reduced from 2 years to 1 and that a definite date for the discontinuance of aid under the Sheppard-Towner Act be now fixed. With those recommendations the bill now awaits action by the Senate. In the meantime, another bill (H. R. 10,986, "A Bill To Repeal An Act Entitled 'An Act for the Promotion of the Welfare and Hygiene of Maternity and Infancy, and for Other Purposes,' approved November 23, 1921, and amendments thereto") has been introduced in the House of Representatives. It seems worth while, therefore, to inquire into the nature of the original Sheppard-Towner Act, so as to facilitate intelligent action on the bills now pending and to promote a constructive program for future action should the life of the act be prolonged.

#### **Purpose and Scope of the Sheppard-Towner Act.**

The Sheppard-Towner Act authorizes federal appropriations to stimulate and aid the states in protecting and promoting the health of mothers and infants. It denies aid, however, to every state that will not subject its activities to the supervision and control of a federal bureau and a federal board and that will not appropriate from the state treasury money to match the federal subsidy. If the state's plans for the hygiene of its mothers and infants are not pleasing to the federal board, no federal funds are forthcoming. If the federal board does not like the way the state is carrying its plans into effect, the board can discontinue federal aid. Each state must determine whether it will or will not accept the proffered subsidy and submit to federal supervision and control. Connecticut, Illinois, Kansas, Maine and Massachusetts have steadfastly refused to do so. The federal government is represented in the case primarily by the Children's Bureau, a lay bureau in the Department of Labor. The chief of that bureau, however, functions also as a member of the Board of Maternity and Infant Hygiene, her comrades being the U. S. Commissioner of Education and the Surgeon General of the U. S. Public Health Service. The administration of the act is entrusted to the Chief of the Children's Bureau, the board having authority merely to pass on the adequacy of state plans and activities.

It can be readily seen from the foregoing analysis of the Sheppard-Towner Act that it empowers the federal government to use money, collected from the people through federal taxation, to induce or compel the several states to surrender to the federal government the right to supervise and control the hygiene of maternity and infancy within their respective state borders. That the federal government has no right to control such matters by direct federal legislation seems to be universally conceded. The question as to whether it has the right through the devious agency of conditional federal subsidies, as provided in the Sheppard-Towner Act, to accomplish that which it cannot accomplish directly has been presented to the United States Supreme Court for decision. The court held, however, that it could not properly pass on the question in the form then submitted, because the determination of the question submitted lay within the discretion of Congress, a coördinate branch of

the government, and was not subject to review by the court. (Commonwealth of Massachusetts v. Mellon, and Frothingham v. Mellon, 43 Sup. Ct. Rep. 597.) No one has yet found a way of bringing the situation before the United States Supreme Court in a form in which that court can pass on it, and the constitutionality of the act remains therefore undetermined.

#### **Proposed Extension of the Sheppard-Towner Act.**

Some of the proponents of the Sheppard-Towner Act now contend that the act is permanent legislation. Up to the time of their recent declarations, however, it had been commonly believed that the act was temporary, limited by its own express provisions that authorized appropriations only until the fiscal year ending June 30, 1927. That view seems to be borne out by the now admitted necessity for specific legislative authority for any appropriation to continue operations under the act after the period stated; for if the act is permanent in character, new legislation should not be needed to enable Congress to make appropriations to carry it into effect.

In the hearings before the House Committee on Interstate and Foreign Commerce preceding the enactment by the House of Representatives of the bill to authorize appropriations for 2 additional years, the proponents of the legislation admitted that, if the purposes of the Sheppard-Towner Act as conceived by them are to be accomplished, an extension for 2 years was insufficient and that other extensions would probably be sought. They were unwilling to state any definite time by which, in their judgment, the purposes of the act would be accomplished. The House of Representatives looked complacently on the prospect of repeated appeals for extensions of the act and passed the bill providing for a 2 year extension. In the Senate, the Committee on Education and Labor recommended that the bill passed by the House be enacted, but only after amendment reducing the extension of the act from 2 years to 1. In the opinion of the committee, it seems, the work undertaken by the federal government under the Sheppard-Towner Act belongs in principle to the states and should be allowed to revert to them as soon as practicable. At present writing, the bill, with the committee's proposed amendment, is pending in the Senate. The bill providing for the repeal of the Sheppard-Towner Act is pending before the Committee on Interstate and Foreign Commerce of the House of Representatives.

#### **Fallacies of the Sheppard-Towner Propaganda.**

In recent hearings before the House Committee on Interstate and Foreign Commerce, as in all other propaganda in support of the Sheppard-Towner Act, one looks in vain for facts and figures showing a reduction in maternal and infant mortality through the operation of the act. The best way to pass on the merits of the pending legislation to extend the act or to bring about its repeal seems to be, therefore, to examine the arguments commonly offered in support of the Sheppard-Towner plan.

(1) In support of the Sheppard-Towner plan it is commonly urged that maternal and infant mortality in the United States is excessive, as compared with maternal and infant mortality in other countries, and therefore must be reduced. The comparisons offered by the proponents of the Sheppard-Towner plan, however, to show such excessive mortality in the United States do not justify the conclusion that such mortality is

higher than in other countries; nor if it be higher, that such mortality in the United States can be reduced to foreign standards by legislative action, nor that the needful legislation could be enacted by the federal government more effectively than by the states.

(2) The Sheppard-Towner Act stresses artificially the importance of maternity and infant hygiene. It does not take into consideration the relative importance of the various health activities in which a state must engage. It disregards limitations on the state's resources for health work and the possibility that to appropriate money to meet the requirements of the Sheppard-Towner Act it may be necessary to curtail essential activities in other fields. The act tends, therefore, artificially to unbalance the health program. From the standpoint of public health administration it is illogical and unwise.

(3) The distribution of money appropriated under authority of the Sheppard-Towner Act is arbitrary and irrational.

(4) The purpose of the Sheppard-Towner Act is presumably to increase state appropriations and state activities for the lowering of maternal and infant mortality. The subsidies provided by the act, however, do not necessarily accomplish that end. Such subsidies are presumed to be matched against appropriations for new or enlarged activities. But they may be matched equally well against appropriations that were regularly made before the Sheppard-Towner Act was passed. The mere reallocation of items in a state budget can produce an apparent increase in the appropriation for maternal and infant hygiene and in that way procure an increased Sheppard-Towner subsidy, without any increase whatever in the state's activity in the field of maternal and infant hygiene.

(5) The extent to which the Sheppard-Towner Act produces increases or decreases in maternal and infant mortality cannot be determined by a study of mortality rates alone. It must be shown by other evidence that but for the passage of that act such increases or decreases would not have occurred.

(6) Maternal and infant health work can not be separated from health work generally. If the government maintains supervision over maternal and infant health work in the states, it must ultimately gain control over all other health activities; otherwise there may be wasteful duplication of effort and a possible working at cross purposes by the federal and state agencies.

(7) The Sheppard-Towner Act involves a wasteful and unwise duplication of effort in federal health activities.

(8) The proponents of the Sheppard-Towner Act claim that the interest of the federal government in mothers and babies justifies it in subsidizing in their behalf state health activities and in taking over the supervision and control of them. If so, the interest of the federal government in persons of other ages obviously would justify it in providing subsidies in their behalf and in taking over the supervision and control of health work for them also.

#### Conclusion.

The comments here offered have been written in the hope of bringing about a clearer understanding of the purposes and probable effects of the Sheppard-Towner Act. The subject has been approached from the standpoint of public health administration and from the standpoint of government. The physician is no less a citizen because he is a physician, and it is conceived that he is interested in the act and entitled to speak

concerning it from both standpoints. If what has been said leads to the conclusion that the life of the act should not be prolonged or that the act should be now repealed, that conclusion should be made known to the senators and representatives who represent in Congress the readers of these comments.

Unless you are in favor of "state medicine", it would be wise to act in this matter promptly and do your part, personally, to prevent the proposed legislation. This particular law is typical of the several attempts made in recent years to give the national government control of state affairs, and in this instance it attacks the fundamental right of the individual states to control their own health activities. So far as it concerns the practice of medicine it is but an entering wedge and if we submit tamely to this act others more seriously affecting the practitioner may be expected.

Our advice is that you inform your own Representative and Senator immediately that you disapprove legislation of this sort, and deliver your message in no uncertain terms.

## Clinical Report.

### HYPERNEPHROMA ASSOCIATED WITH POLYCYTHEMIA: CASE REPORT.

Robert A. Kilduffe, M.D., Director of Laboratories,  
and David B. Allman, M.D., Visiting Surgeon,  
Atlantic City Hospital.

The case herewith reported is deemed of interest because of the marked and persistent polycythemia associated with hypernephroma. While this association is not unknown, it is rare and this report is made because of the infrequency of coincident presence of these two not obviously related pathologic entities.

The patient was an inmate of 2 hospitals and came under the observation of several physicians. We are indebted to these various sources—Drs. A. M. Ornsteen by whom the patient was attended, and C. C. Wolferth under whose care the patient was admitted to the University of Pennsylvania Hospital.

The various data thus obtained are combined in the history following:

M. F. male, colored, aged 59, a native of Austria, was admitted to the University of Pennsylvania Hospital, October 10, 1925.

Chief Complaint: Constipation. In March, 1925, he had an attack of "biliousness" for which he received medical treatment, without marked relief. Two weeks later, while endeavoring to determine the cause of abdominal distension present since the "bilious" attack, he discovered a small mass at the costal margin in the right anterior axillary line. This was very hard but not painful on pressure and could only be felt when the patient was standing. It was diagnosed as a floating kidney, after an X-ray examination, and a belt was prescribed.

The mass has never given any direct discomfort but continued to grow in size until, at the time of admission, it was the size of a hen's egg and palpable in the recumbent as well as the



erect position. His appetite has been poor but there has been no loss of weight. He has not worked for 4 years, mainly because of his age rather than any physical disability. There were no urinary symptoms of any description. He has never been jaundiced. There are no other symptoms other than insomnia without apparent cause.

Previous Medical History: Typhoid fever at 10 years of age. Denies all other diseases, including venereal.

Social History: Was a textile worker but has been supported by his children for the past 4 years. Habits regular; admits no excesses, dietary or otherwise.

Family History: Mother died at 55 of typhoid fever; father died at 76 of "old age". No history of tuberculosis or malignancy.

Physical Examination: October 24, 1925: Well nourished and did not appear actually ill. The general examination entirely negative except for a mass about 1½ in. in diameter in the anterior part of the neck, to the right of the midline, which moved on swallowing, and absent Achilles and patellar reflexes. The biceps and triceps reflexes diminished. There was no Babinski.

The salient features of the physical examination were those of the abdominal cavity. There was a mass in the right upper abdomen which extended below the costal margins to the level of the umbilicus and which seemed to be continuous with the liver. In contour it was irregularly round and about 4 in. in diameter, lying against the abdominal wall and extending toward but not to the midline. B. P. 134/188. Urine presented no findings of interest then but on subsequent examinations traces of albumin and large numbers of pus cells were found. Hb. 129%. R. B. C. 7,400,000. W. B. C. 8300. Neutrophiles 72%; Lymphocytes 18%; Large Mononuclears 10%. Ureteral 'pthalein test (10/31/25): Left: 21%; right: 8%. Urea N.: 18 mgms. per cent. Wassermann: Negative.

X-ray of chest: Definite glandular enlargements in hilum; lungs rather fibrotic.

Cystoscopic: Definite bladder congestion. Urine from left catheter free of abnormal cellular elements. Intravenous 'pthalein: Left 21%; right 2%.

There were no changes of significance in the clinical picture during the next 4 weeks.

It was suggested by Dr. O. H. P. Pepper, who saw the case in consultation, that, if the patient had an adrenal neoplasm, probably hypernephroma, involving the right kidney and occluding the right spermatic vein, the polycythemia might be explained as due to adrenal stimulation.

Occasional chills and febrile attacks accompanied by showers of pus in the urine occurred but no other events of interest.

A pyelogram (Nov. 17) showed the upper calyx apparently pushed downward, causing a distortion of the shadow probably due to a tumor. The patient was discharged unimproved on November 27, with a final diagnosis of pyonephrosis and probable hypernephroma.

On December 7, he was admitted to the Atlantic City Hospital on the service of Dr. D. B. Allman with the above diagnosis. The patient's general condition was not as good as it had been and while it was realized that his chance for recovery after operation was slight, there was no chance without operation and he was admitted, therefore, for operation upon his own and his relative's insistence. This decision was

made with Dr. Wolferth's acquiescence, who also saw the patient at this time.

On admission the physical findings were as before with the exception that the tumor mass was, perhaps, slightly larger.

The urine showed nothing of interest. The blood: Hb. 110% R. B. C. 8,170,000. W. B. C. 25,840. Polymorphonuclears 83%. Lymphocytes 12%. Large Mononuclears 4%. Wassermann: negative.

Operation, the following day, revealed a huge tumor involving the right kidney. The mass was adherent to all the surrounding structures and was removed entire with some difficulty. The patient reacted fairly well from the operation but there was persistent oozing from the wound and death occurred 2 days later, apparently from the effects of operation shock and hemorrhage.

A blood count on the day of death showed: Hb. 110%. R. B. C. 7,500,000. W. B. C. 16,800. Polymorphonuclears 87%. Large Mononuclears 8%. Lymphocytes 4%.

The tumor, on examination, presented the following features: Specimen consists of a kidney removed entire. The organ is greatly hypertrophied measuring 17x4.5 cm. at the upper pole and 10 cm. in diameter at the lower pole. The upper pole is relatively normal in contour and appears to consist of comparatively normal renal tissue, though there is, on section, evident interstitial hemorrhage and some degree of fibrosis. The lower pole of the kidney is much distorted and of marked irregularity of contour. There are numerous nodular projections which are sponge-like in appearance. The outer surface presents the appearance of having been adherent to the surrounding structures from which it has been freed with well marked hemorrhagic oozing.

When the organ is sectioned longitudinally, the upper pole presents nothing of marked interest other than is suggested in the gross description above. The lower pole, and this portion constitutes the major portion of the tissue as a whole, is seen to consist of a dense, somewhat yellowish area of fibrous consistency, which measures approximately 6 to 7 cm. in diameter, the outline being irregular. Radiating from this in all directions are spongy, somewhat papillomatous masses, yellowish in color, perceptibly friable and easily torn, and interspersed here and there with cyst cavities containing sometimes bloody, sometimes purulent fluid, and sometimes a somewhat gelatinous material.

The gross appearance is strongly suggestive of a malignant neoplasm—most probably a hypernephroma.

Formalin fixation paraffin sections: Sections were cut from the upper pole, the central fibrous core, and various areas of the fungoid mass described.

Microscopy: Sections from the upper pole show as their most salient characteristic, a marked congestion of the malpighian tufts. There is a perceptible and at all time well marked tendency toward desquamation of the epithelium of the tubules. Here and there are areas of interstitial hemorrhage and the general picture is that of a kidney showing parenchymatous nephritis. Sections through the central fibrous core show this to be composed entirely of a dense mass of more or less homogeneous fibrous material. There are no included islands of renal or other tissue. Sections from the lower pole containing the growth show an interesting and complex picture: There is a thin connective tissue stroma which, how-

ever, does not divide the tissue in a manner suggesting an alveolar arrangement. Loosely arranged within these meshes are large numbers of clear, polyhedral cells and cells of epithelioid type all of which contain a large amount of fat—"clear cells". There are numbers of areas of interstitial hemorrhage. There are relatively numerous cyst-like spaces some of which contain blood and some a clear homogeneous, eosin-staining material.

The growth is evidently malignant but its histologic classification is a matter of some difficulty. In many ways it resembles the papillary carcinoma of clear cell type seen in the kidney. However, it is classified for this report as a hypernephroma on the basis of the following characteristics: Its large size, circumscribed character, and fatty, yellowish gross appearance. The tendency toward cyst formation and its vascularity are also in favor of hypernephroma. Microscopically, the high fat content of the cells, the areas of necrosis, the loose relation of the cells to the stroma and to each other, and the presence of the fibrous core, together with the cysts containing homogeneous material, all warrant the classification of this growth as a hypernephroma.

The particular interest attaching to the case is the association of polycythemia with hypernephroma. Such an association has been reported before but no obvious or satisfactory explanation has as yet been advanced.

Because of the fact that, in true erythremia, a marked reduction in the red cell count has been noted after the intravenous administration of sodium bicarbonate, it has been suggested that polycythemia may be, in some way, dependent upon acidosis of the blood plasma. There is little evidence, however, to support this assumption in general and none in the case at hand.

Antonelli, who reports a case of polycythemia associated with neoplasm of the suprarenal capsules, (*Minerva Med.*, 2:769, December 1, 1922) believes that the association was due to a pathogenetic connection between the two conditions, the mechanism of which remains undetermined.

Cutler, reviewing the literature of hypernephroma and reporting 32 cases encountered during a period of 16 years, (*Bull. Johns Hopkins Hospital*, July, 1924, p. 214) found the blood picture uniformly that of a secondary anemia, so that polycythemia may be regarded as an uncommon associated finding, the occurrence of which warrants its report.

lar each month. Last period being May 6 and normal in all respects. She has been quite constipated but no attacks of pain of this character. At time of examination temperature 102°. Abdomen quite tender, especially across the lower part and right side; some rigidity of the right rectus muscle. Not able to make out any tumor by palpation externally.

As her condition seemed urgent we removed her to the Hospital at once and at 5:30 p. m. operated.

On opening the abdomen with the usual appendectomy incision quite a little serous fluid was found but no indication of pus and no odor. The intestines were considerably congested and the appendix was considerably inflamed. However, the trouble with the appendix did not seem to be the primary cause and after removing the same I explored the pelvis and found quite a mass which proved to be the right ovary about 3 times its normal size and on the end of which was a ruptured sac nearly the size of a golf ball from which the contents had escaped. This had every appearance of and undoubtedly was an extra-uterine pregnancy of 5 or 6 weeks standing. The fallopian tube was somewhat congested and enlarged and the whole was removed. The uterus was considerably enlarged and boggy. Left ovary and tube normal. Some blood clots from the ruptured sac. The débris was washed and sponged out but no fetus found. Abdomen was closed in the usual manner and the next day after a sharp chill the temperature reached 103° at 4 p. m. and 104° at 8 p. m. Patient, however, did not seem to be particularly distressed and there was no indication of peritonitis. She started a slight flow the morning of the next day, i. e., June 13, temperature 8 a. m. 102.5° and at noon 103.2°. Flow increased and in the morning of June 14 a sac was expelled which contained a fetus indicating about a 5 or 6 weeks pregnancy. Temperature dropped down to 100° and on June 15 was at normal, and she made an uneventful recovery. Stitches removed on June 20 with no indication of any sepsis. Abdomen apparently normal in every respect. Patient was up and about June 22.

This case is reported to point out the possibility of a double pregnancy; one being normal and the other extra-uterine at the same time.

## Lay Mirror Reflections

### COINCIDENT NORMAL AND EXTRA-UTERINE PREGNANCIES.

George W. Lawrence, M.D.,  
Lakewood, N. J.

This is a case reported as being a little out of the ordinary.

I was called in the afternoon of June 11 to see a case with Dr. T. Patient had been in bed without medical attention since June 7, at which time she was taken with pain in the right side and abdomen, and vomiting. Mustard paste and hot applications had been applied to ease her pain, but, not improving, Dr. T. was called on the morning of the eleventh. Finding indications of inflammation and a temperature of 100.5°, he advised operation and called me in consultation the same afternoon.

Patient, colored, female, 21 years old, married, and has had one child now about 1 year old. Since this pregnancy her periods have been regu-

### REAL DOCTORS ARE NOT IN SCHOOLS.

Under this title the New York Times of April 1 published a note which should be helpful toward dissipating misunderstanding in the public mind regarding the relationship of "cults" to regular physicians. The public is prone to consider any newly suggested form of treatment, for any disease or limited numbers of affections, as constituting a "new school of medicine." We cannot always take the time and may not often have the opportunity, to combat these misconceptions, but whenever possible we should embrace the chance to explain that there is but one honest, legitimate "school" of medicine and that members of that school—properly qualified and licensed physicians



—study and are at liberty to use any known method of treating disease conditions.

We quote the Times article:

A too common misapprehension as to the medical profession was expressed this week by Samuel Untermyer in a letter to John Knight, Republican leader of the State Senate. As a reason for opposing the Webb-Loomis Medical Practice bill, Mr. Untermyer wrote: "The great body of physicians in this state is so divided, and there are so many schools of physicians at war with one another, that it is unjust to place the members of any one school in the power of this dominating faction or of any other faction."

But the medical profession, properly so called, is not divided into either schools or factions. Their only division is into general practitioners and specialists. The latter, however, have had the same preliminary training as the former, and between the two there is no war and nothing like a war. In theory always, and in practice usually, they work together in perfect harmony.

The only war is between the followers of the various cults and fads that form the lunatic fringe of medicine. There is where denunciations of rivals are to be heard, and naturally, for each group insists on vaunting and exploiting the efficacy of a single remedy for every ill, and each is obliged to declare all panaceas except its own to be worthless.

The real doctor does not believe in cure-alls. He does not ban suggestion or "physiotherapy" when his diagnosis indicates its value. Whether the Webb-Loomis bill does or does not put too much power in the hands of too few men is debatable, but its fault is not that of giving one "school" of real doctors too much authority over other "schools," also of real doctors.

#### ATTENTION! ANTIVIVISECTIONISTS.

A new victory for our Army Surgeons.

(N. Y. Times, June 2, 1926.)

There has just been repeated in the Philippines a triumph of medical science worthy to rank in merit, though of course not in glory, with the one achieved in Cuba, also by American army surgeons.

Then it was yellow fever that was conquered and so thoroughly that now, if that scourge lingers anywhere, it is in some South American port so small and remote from the paths of commerce that news of what to do has not reached it. The new achievement is the discovery, not that dengue fever is carried by a mosquito—that has been long more than suspected—but that it is carried by a particular species of mosquito.

According to report, the criminal is the same as in the case of yellow fever, but the name is given in the dispatch, "Aedes aegypti," is far from being the same as the "stegomyia," made famous, or infamous, in Cuban annals.

But that is a small matter. What counts is that again there was a call for army men to submit to inoculation as the only way to settle the problem of the fever's transmission, and again there was a prompt and cheerful response. That human beings instead of animals were used in the research is due, as in Cuba, to the fact that the fever is one to which all animals, so far as known, are immune. Nothing can be learned, therefore, by injecting the germs of the malady in their bodies.

The antivivisectionists should note that whenever necessary for the settlement of a question of this kind there never is any lack of men who volun-

teer to risk health and even life in the service of humanity. It is not so easy to die of dengue fever as it used to be of yellow fever, but the former is quite bad enough, and to chance it takes courage of the highest order.

That is why, in commending the seventy-five volunteers in general orders, the commanding General in the islands takes pains to say that what they did was "above the normal requirements of duty."

#### HOSPITALS IN ORANGE, HYGIENE IN CARTERET CAUSE NATION'S RECORDS.

(Newark Evening News, May 27, 1926)

Birth Rate Without Non-Residents in Maternity Wards is Normal.

Orange's top place in the nation in birth rate figures compiled by the United States Department of Commerce is due, in part, to the presence within its confines of two large hospitals, according to Miss Lenore Young, health officer of the city.

The Department of Commerce yesterday announced a birth rate in Orange of 50.3 per 1000 of population, approximately two and one-half times the birth rate in the state and twice that in this city.

Miss Young stated that the figures of her own department, based upon births to persons actually resident in the city, gave a rate of 20.25. Under the present state laws regarding returns of birth records and the care with which they are observed, this figure, Miss Young said, could be regarded as quite accurate.

In computing this rate, she stated, the health department took into consideration births occurring elsewhere to parents who were residents of Orange, when return was made from the place of birth. No births at St. Mary's or Orange Memorial hospitals were counted where the parents were not residents of the city. These factors were ignored by the Department of Commerce, according to Miss Young, the total number of births within the city being taken and applied to the total population.

Deaths Reduced by Work for Children's Health in Industrial Town.

Carteret, May 27.—For answer to inquiries descending on Health Inspector Frank Born as to how Carteret, an industrial town, leads municipalities the country over in low death rate, Carteret points to child hygiene.

Two nurses are employed and two doctors, Dr. H. L. Strandberg and Dr. Samuel Messinger. Immunization work against diphtheria was begun in the borough among children two years ago, and 400 children have been immunized. Since that time not a single case of diphtheria has occurred.

Death from any cause is the signal for prompt investigation by Inspector Born and his force, and measures are taken to prevent spread of the cause, if it is contagious, to other families or within the family where death occurred. A tuberculosis clinic is held every two weeks under the direction of Mr. Born and Miss Marie Neilson of Perth Amboy. Boarding houses, numerous in the borough are kept under vigilant surveillance.

The industrial nature of the borough is pronounced. Chemicals, fertilizer, lumber, steel and foundry plants all are located here, and the workers live for the most part in the borough, which has a population of more than 12,000, and a death rate of 5.6 per 1000.

## County Society Reports.

### ATLANTIC COUNTY.

Joseph H. Marcus, M.D., Reporter.

On June 10, 1926, the annual outing of the Atlantic County Medical Society was held at the Seaview Golf Club, through the courtesy of Dr. Walt P. Conaway. The wives of the members were present and during the afternoon golf was enjoyed by the physicians, with bridge and majong for the ladies. During the evening a testimonial dinner was tendered to Doctors George Scott and Philip Marvel, Sr., of Atlantic City, the speaker for the occasion being Dr. Hobart A. Hare, professor of Therapeutics and Materia Medica at Jefferson Medical College.

Dr. D. Ward Scanlan, President of the Society, acted as toastmaster and in his prefatory remarks stated that this dinner was tendered as a mark of esteem to two of the oldest members of the Atlantic County Medical Society, Doctors Scott and Marvel, Sr. He then introduced Dr. Hobart A. Hare and he in his usual scintillating and oratorical fashion, interestingly outlined the student days of Dr. Marvel. Among other things he emphasized the inherent and invaluable merits of friendship as displayed by the Medical Society in so honoring these distinguished members, thus paying a glowing tribute to both Dr. and Mrs. Scott and Dr. and Mrs. Marvel.

Dr. Walt P. Conaway recounted his association with Dr. Marvel during his period of assistantship, stating that these few years had proved of inestimable value to him in his subsequent practice of medicine.

Due to the enforced absence of Dr. Henry O. Reik, Editor of the New Jersey State Journal, Dr. Conaway read a letter in which Dr. Reik referred to the early days of Dr. Marvel's career:

June 7, 1926.

Dr. Walt P. Conaway, Chairman,  
Scott-Marvel Dinner Committee,  
Atlantic City, New Jersey.

My dear Dr. Conaway:

Seldom have I suffered a keener disappointment than accompanies my being deprived of the pleasure of sitting with the Atlantic County Medical Society this evening to pay tribute of respect to your honored and honorable guests. Unfortunately for me, duty called me elsewhere and my friends would not have me shirk duty even to do honor unto them. So, I would beg the favor of being permitted, in absentio, to speak through you and to offer congratulations and felicitations to Dr. Scott and Dr. Marvel, and particularly to address the latter, whom I have been privileged to know for a longer time perhaps than any other member of your party.

Much longer ago than he cares now to remember, for it was back in the dark ages of the nineteenth century, Philip Marvel was placed in charge of a country school in the village of Frederica, Delaware; a school composed largely of bad boys and mischievous girls. In spite of the many difficulties encountered there, he performed his task as a teacher, as he has all others in life—with tact and skill and a singleness of purpose that wins success. As a country lad, I received from him my first inspiration to study for the pure love of learning. Throughout the many years that have since elapsed, he has been a constant source of inspiration and a living example of what a member of our profession should be:

Learned in the science of medicine; skilled in the art of applying that knowledge; devoted to the principles and ideals of the great physicians of history; earnest in the performance of all duties and in the acquittance of obligations; honest in all dealings with the sick; a seeker after truth but always dominated by humanitarian impulses; above all, a man that loves his brother as himself. To the country boy of olden days Dr. Marvel continues to be the admired teacher and the beloved friend.

On the occasion of this celebration of the fact that we have in our midst two such distinguished physicians, and toward your society's testimonial to their eminence and your evidence of admiration of and respect for their attainments, I would like to contribute my personal greetings and give expression to the hope that they will continue with us for many more years as guides and exemplars.

Sincerely yours,

Henry O. Reik.

Dr. Scott expressed his sincere gratitude and profound appreciation to the members of the society in so honoring him, further stating that the members of this association have always proved to be a source of inspiration to him.

Dr. Marvel, Sr. expressed himself as being profoundly grateful for this generous friendship and kindly exhibition of friendliness. He, then, in a most interesting fashion outlined his early days in practice in Atlantic City and its environs, feeling that the hardships of the practice of medicine in the early days presented no insurmountable obstacle to doing one's duty to mankind. The necessity of associating himself with younger men and the urgency of encouraging a wider scope in the practice of medicine was recognized by him at a very early time and it is surprising to note that Dr. Marvel has up to the present time associated with him a total of 25 physicians. Dr. Marvel has been practicing medicine for 42 years.

### CAPE MAY COUNTY.

Eugene Way, M.D., Reporter.

The regular semiannual meeting of the Cape May County Medical Society was held at the Egg Harbor Inn, Beesleys Point, on Tuesday, June 7, 1926, with the President, Dr. George F. Dandois, in the Chair. The occasion being "Ladies' Day", 16 of the fair sex were present, while the men numbered but 15.

Dr. Arnold J. Friedland and Dr. Ida M. Friedland, of Woodbine, were elected members of the Society.

The question of changing the present form of the Board of Trustees of the State Society was taken up for discussion, the consensus of opinion being that no change is needed, but under the circumstances it was thought best to allow our Delegate to use his judgment in the matter and it was so voted.

Dr. Clarence W. Way, Delegate to the meeting of the State Society for 1925, gave a report of the meeting, showing its wonderful help and inspiration to all physicians and urged every member of the Society to attend the meeting this year.

Colonel Charles M. Gandy was elected Censor to fill the vacancy caused by the death of Dr. V. M. D. Marcy.

The President then introduced Professor Edward J. Klopp, of Philadelphia, who gave an interesting address on "Abdominal Surgery with



Special Reference to Appendicitis and Extopic Gestation". Dr. E. J. Beardsly, of Philadelphia, then gave an able address on "Preventive Medicine", laying great stress on diphtheria and syphilis. Drs. Klopp and Beardsly were voted the thanks of the Society.

The need of a Welfare Home in the county was set forth by Dr. Julius Way and a resolution addressed to the Board of Freeholders recommending the same was adopted.

Dr. H. O. Reik addressed the Society on the work of the State Welfare Committee.

Voted that the next meeting be held at the Woodbine Colony.

### ESSEX COUNTY.

#### Newark Beth Israel Hospital Clinical Society.

S. J. Soschin, M.D., Reporter.

The regular monthly meeting of the Newark Beth Israel Hospital Clinical Society was held on May 5, 1926, at the Academy of Medicine, with Dr. B. Abrams presiding.

Dr. E. Parsonnet reported a case of dermoid cyst in the sac of an umbilical hernia. There has been no parallel found in the literature. The case simulated intestinal obstruction and there was a pulsion diverticulum of the ileum. Dr. Soschin read a paper on the "Management of the Acute Traumatic Abdomen". This was discussed by Drs. Danzis, Robbins, Abrams, Rothenberg and Polevski. Dr. H. Reich read a paper on "Treatment of Head Injuries". This paper was discussed by Dr. Danzis. (Both papers will be published later in the Journal). This was discussed by Drs. Danzis and Soschin. The following thoughts were brought out. The hernial sac should be dissected out, opened and sutured over. The fascial ring should be carefully cleaned off, and, lastly, care should be exercised in hemostasis.

### MERCER COUNTY.

A. Dunbar Hutchinson, M.D., Reporter.

The Mercer County Society met in the Carteret Club on June 9.

Unfinished business provided sufficient entertainment for the evening, our previous meetings being completely filled by the excellent speakers secured by our efficient program committee.

The committee appointed by the President to draw up Resolutions on the death of Dr. Edward S. Hawke, submitted a report which was read and adopted.

Drs. Scammell, Haggerty and George Williams were appointed as a committee to confer with the Secretary of Middlesex County relative to a tricounty meeting.

The Society will meet in Princeton, Proctor Hall, June 23, at which time Dr. John F. Anderson, of Squibbs Laboratories, New Brunswick, will talk on the subject, "The Control of Streptococcal Infections, with Particular Reference to Scarlet Fever, Erysipelas and Puerperal Fever".

### MIDDLESEX COUNTY.

John H. Rowland, M.D., Reporter.

The regular quarterly meeting of the Middlesex County Medical Society was held in the Nurses' Home of the Perth Amboy Hospital on Wednesday afternoon, June 16, 1926. The meeting was called to order at 4 p. m. by Dr. J. P. Schureman, of New Brunswick. After the regular order of business was disposed of, the speaker

of the afternoon, Dr. William S. Bainbridge, of New York, was introduced, and he gave a very interesting and inspiring talk on "Cancer". Dr. Hoffman, of New Brunswick, and Dr. F. C. Henry, Jr., of Perth Amboy, entered into the discussion which added much to the program.

Almost 45 members were present to enjoy the meeting. The following physicians have been elected to membership since January 1, 1926: F. M. Clarke, New Brunswick; G. H. Gehrman, Highland Park; J. M. Gusanti, Perth Amboy; M. L. Rona, New Brunswick; W. C. Wilentz, Perth Amboy; Rothchild, New Brunswick; Walker, Highland Park; W. E. Sherman, New Brunswick, and Szolo, Perth Amboy.

### MORRIS COUNTY.

Marcus A. Curry, M.D., Reporter.

The fourth quarterly meeting of the year 1925-26, of the Morris County Medical Society, was held on Tuesday, June 8, at the Shongum Sanatorium (Morris County Tuberculosis Hospital); the members being the guests of the management of that institution.

President Glazebrook called the formal meeting to order shortly before noon on the sun porch of the nurses' home, there being about 18 members and guests present; among the latter were Drs. George B. McMurray, R. J. Harquail and George W. Comeau of the State Hospital at Greystone Park. Routine business was disposed of expeditiously and evidenced good work done by the officials, including the Executive Committee.

Dr. Ackerman transmitted a communication from an insurance agency relative to "Group Insurance", to the effect that owing to an insufficient number of members of the society it could not be arranged directly with the society; but that permission had been granted to submit the matter to the State Society and expressing the hope of support from the County Society. President Glazebrook observed that he thought they were going at the matter of insurance in the right way and saw no reason why group insurance could not be arranged for, if thought to be wise.

Dr. Mial, chairman of the Nominating Committee, reported the following recommendation of officials for the coming year to be acted on at the annual meeting in September: President: Clarence A. Plume, Succasunna. Vice-President: Samuel C. Haven, Morristown. Secretary: George H. Lathropé, Morristown. Treasurer: F. Grendon Reed, Morristown. Reporter: Marcus A. Curry, Greystone Park. Historian: H. W. Kice, Wharton.

Executive Committee: Francis H. Glazebrook, Morristown; William A. McMurtrie, Morristown; Ellery N. Peck, Boonton.

Annual Delegates: William F. Costello, Dover; F. Irwin Krauss, Chatham; L. E. Williams, Madison.

Alternate Delegates: Edward Ackerman, Dover; Byron G. Sherman, Morristown; William J. Summers, Boonton.

President Glazebrook announced that this ticket, read by the chairman of the Nominating Committee, does not preclude other nominations at the time of the annual meeting in September; that it simply is a ticket gotten up by the committee appointed to make nominations; no action is necessary at this time; if members have any suggestions they can bring them up at the annual meeting.

James K. Pollock of the State Hospital at

Greystone Park was unanimously elected a member of the society.

President Glazebrook announced for first consideration, under new business, the place of holding the next meeting, the annual meeting in September. He stated that the society has been invited by Superintendent Curry to hold the September meeting at the State Hospital at Greystone Park. By action of the members the invitation was unanimously accepted.

President Glazebrook and Secretary Lathrope spoke on matters of intimate interest to the delegates to the State Society annual meeting at Atlantic City, urging a full attendance of delegates and a large attendance of members of the society.

Adjournment was taken and the members joined with the management of the sanatorium, county officials, members of various health organizations and other guests, including Dr. Samuel B. English, Superintendent of the State Sanatorium for Tuberculosis, at Glen Garden, for the open exercises.

President Thomas B. Leonard, of the Board of Managers, and Superintendent Miss Katherine E. Dandley escorted the guests through a complete inspection of the sanatorium. Everything seemed to provide good reason for complete satisfaction so generously expressed with the efficient operation of the institution.

The inspection being over, luncheon served by "Piper" of Morristown, was relished and the guests then were grouped for the afternoon chapter.

The afternoon session was opened by President Glazebrook's saying: My excuse for being here is that this is the regular quarterly meeting of the Morris County Medical Society and as President of that organization it happens to be part of my duties to introduce Mr. Leonard, President of the Board of Managers of the Sanatorium. I tried to back out but Mr. Leonard insists upon being properly introduced. I am glad to have the opportunity to say just a word in behalf of the County Medical Society, in regard to the institution. We have been holding the June meeting here for the past 4 or 5 years and there is no question that the combined arrangement has proven very beneficial both to the institution and to the men of our society. I don't think we knew the place before we commenced coming here and there were many people who should have been here as patients who were not sent here; but since the society has been coming to these meetings, very much greater interest has been shown by the physicians throughout the county and they are very much more alive to the situation here, and patients are coming here earlier, which means better results. I want in behalf of the society to congratulate the Board of Managers and Superintendent Miss Dandley of the sanatorium. I think everyone of you who have been coming here will agree with us that great strides have been made and that it is perfectly extraordinary what has been accomplished in this place. I wish also to thank you for the delightful luncheon that has been served. I now take pleasure in turning the meeting over to Mr. Leonard.

Mr. Leonard: "My friends, it is a real pleasure to see you here today and I greatly appreciate what Dr. Glazebrook has said; I feel very much pleased with his point of view with regard to Shongum Sanatorium; and what we are very anxious to do is to get this well before the people of Morris County, not only the physicians but the laymen and the laywomen. We want you all to come here at any time and go through the

place and get thoroughly familiar with the sanatorium. We have here in Morris County about 83,000 people and this county institution is supported in its entirety by the county, through its Board of Chosen Freeholders. I want to say in that connection that we have accommodation for 44 patients, that is 44 beds. Our enrolment has run a little under that. We hope that we can get a larger number of patients here, because they are in the county and to segregate them would be to benefit them and their families."

Director Waters of the Morris County Board of Chosen Freeholders being introduced spoke in superlative terms of praise of the sanatorium and its management, stating that it is one of the institutions managed as nearly perfectly as is possible.

Fletcher Fritts was introduced as Chairman of the Tuberculosis Committee of the Board of Freeholders and a friend of the sanatorium. He spoke in terms of high compliment of the efficient manner in which the sanatorium is conducted and said that physicians are a great source of assistance as they are in touch with the people and can do a great deal to advance the purpose of the institution; that they have been a great inspiration to those connected with the sanatorium, the Board of Managers, the Superintendent, and the Board of Freeholders, who appreciate it. He also paid tribute to the work of those active in antituberculosis associations for what they do for Shongum and their work for children in sending them to Farmingdale.

Dr. Frank Pinckney, attending physician of the sanatorium, gave a lucid history of the sanatorium from its inception in 1912 and its growth from 21 to 44 beds, due to the institution becoming better known largely because of the holding of the County Medical Society meetings here, and through the County Antituberculosis Association.

Dr. Dean Abell, President of the Morris County Tuberculosis Association, gave an intensely interesting account of the work of the association, stating as its basic purpose, to do everything within its power to eradicate tuberculosis; not only attempting to discover and send cases to Shongum but to other institutions and to spread education in the homes as well; also investigating the homes of every patient in the county admitted or discharged not only at Shongum but also Glen Gardner and any other institution in the State. The report of Dr. Abell indicated a vast amount of ground covered and work done by the association, with many difficulties encountered and overcome.

Dr. Linsly R. Williams, Managing Director of the National Tuberculosis Association and Director of the New York Academy of Medicine was introduced for the address of the day, his subject being "Tuberculosis in Relation to Public Health Activities."

Dr. Williams nicely attuned his address to the understanding of a mixed audience and was fascinating with fundamentals of the origin and promotion of the fight against tuberculosis. It seemed to him that the most successful and important movement has been the organization of innumerable associations for the purpose of combating tuberculosis; they have been the leaders in starting something going for the betterment of the care of tuberculosis and the prevention of other cases occurring; crediting these organizations for their work in bringing about enabling legislation to make possible the county sanatorium; as a result of the energetic work that has been done there now are 65,000 tuberculosis



beds in the United States; the death rate has diminished one-half in the past 20 years; the number of cases has been enormously reduced; in comparing the situation of today with that of 20 years ago, we know an increased number of persons have been warned of the danger of tuberculosis; we know a larger number of children have been given instruction with regard to tuberculosis; there has been a great improvement in housing conditions; the average workman is better fed and has shorter hours of work; we know that intelligence has been applied as it never has been applied before in this country; we know these various factors that have improved the conditions of the average family have resulted in an increased cost of living, under which we groan and pay taxes; nevertheless it has been a factor in improving health and happiness so that it has made this country the envy of all the other nations of the world; we know that the number of people afflicted with tuberculosis is only half of what would have been the case 20 years ago; in some of the larger cities in Europe, before the war, when tests were made with tuberculin to see the number of children that reacted, nearly every child reacted to the test, showing evidence of being infected with tuberculosis; we say immunity has been conferred in association with persons with tuberculosis, as we all have a small amount of infection; people say if you continue the tuberculosis work until the tuberculosis bacillus is completely eradicated you will then breed a race which has no tuberculosis and which, if brought into contact with tuberculosis, will succumb the same as the Fiji Islanders succumb to measles; that may be so, but it will be many decades before tuberculosis has been entirely eradicated from our midst; another factor has been most helpful in tuberculosis work and probably as important as any; that is the earlier diagnosis and the better treatment of patients; 25 or 35 years ago it was not uncommon to find people treated and going around and working, their temperatures not being taken, until they became so weak they couldn't go any further, and then they were put to bed to die as rapidly and as comfortably as possible; the medical profession has changed that; effort is made to see that patients are treated with the rest idea and fresh air; first, rest; then some more rest; I don't think all people can take the rest the physician recommends; a patient comes down with hemorrhage, which means no talking, no raising the hands to the mouth, and being fed by the nurse; that is, complete rest; there are some humans who can't keep quiet; if you place a patient at complete rest in bed the respirations will fall to 14 or 16 a minute instead of 24 or 26; if you can reduce respiration by half you are giving nature a chance to heal. Among the questions being investigated are: Why does the tuberculosis bacillus enter an individual cell? Why does the individual cell succumb to the bacillus? Why does the tuberculosis bacillus die in that particular cell? There are men who actually state that there are one individual cell and one individual bacillus; we always thought the smallest number of bacilli in any cell was several millions. If we can find why the cell dies and why the bacillus dies, then we shall have some basis for trying to find some means of prevention and cure. In 25 years we have noticed a most remarkable change in the tuberculosis situation, in the decline of the death rate and the diminution of the group. That is due to three chief factors: First, education as a prophylaxis; second, earlier diag-

nosis and care in institutions; and third, improvement in the general standard of living. The ratio of disease varies with the individual's intelligence and economic status. Periodic health examinations which some regard as a new idea were first started in London in 1861. An Englishman puts it in a graphic way: "No fool ever gets well of tuberculosis." It is a great test of character; the one with character gets well; the one with ambition gets well.

Dr. Williams delivered his address with much clarity of expression and treated his subject expansively from the inception of the tuberculosis movement, emphasizing the remarkable progress made and its collateral beneficial results in minimizing other diseases, stressing the work done by the lay organizations, the clinics and sanatoria, the keener alertness of the physicians and the advances in tuberculosis surgery; all of which combined with a recital of the situation replete with allusions to the past, present and future, was an inspiration to his attentive audience and lent an added impetus to the work of conserving humanity in a state of increased health and happiness.

#### PASSAIC COUNTY.

Donald B. Low, M.D., Reporter.

An innovation, in the form of a "Dean's Dinner", was established by the county medical society when, on June 8, in lieu of the regular monthly business and scientific session, the members met at the North Jersey Country Club to do honor to the county's oldest active practitioner—Dr. James M. Stewart, of Paterson. With Dr. Chas. R. Mitchell, President of the Society, acting as Toastmaster, and 80 members in attendance, it was an enjoyable event and a splendid tribute to the honored guest.

Members of the association spent the afternoon in golf, tennis and quoit contests, Dr. Francis Todd, having piled up the best golfing score, winning the box of golf balls which was offered by President Mitchell to the winner of that particular contest.

President Mitchell's opening remarks after the banquet, in the course of which he paid a glowing tribute to Dr. Stewart were followed by a toast to the dean of the active physicians of the county. He stated that Dr. Stewart, beloved by all, is still actively attending to the duties of his practice, although he, now more than three score years of age, is the oldest physician in the county.

When the honor guest of the evening was reached there was a noticeable lull in the proceedings, unusual for a banquet and it was evident that the guests were expecting to hear a poem composed for the occasion, for Dr. Stewart has been noted for years as a master of rhyme and he has been called upon for many of Paterson's leading public events to pen some appropriate tribute. However, the guests were to be disappointed on that score, for, modest man that he is, he did not deem a public dinner to himself as an appropriate place for poetry, but, instead, entered into the prose in his happiest vein and choicest English, so that his auditors were not only amused but delighted with his diction. His address follows:

"Today the Passaic County Medical Society is celebrating the advent of an annual medical holiday to be known as the Dean's day. The dean is the honored guest of the day. He is the one

apart, alone, on an eminence where his merely average fellows see, admire, and applaud him for his continued dexterity in dodging death, the ultimate separator.

"The requirements of a dean are not exacting. He need not be handsome in appearance, dignified in manner, oracular in speech. He need not be possessed of the wisdom of Solomon, the skill of a scientist, the imagination of the artist. All he needs is to be clothed in the garment of the years and bask in the admiration and envy of his younger and less favored contemporaries.

"As is well known, your initial dean, your dean that tops the list of all succeeding deans is in full possession of all these non-requirements. This admitted fact is not only gratifying to his innate modesty, but must be eminently satisfactory to the society.

"For the information and conduct of all future deans, it is perhaps advisable that their most important functions should be definitely stated. To pose as a father to his children; as a king to his subjects. To receive with patronizing smile any gifts—if any are offered—unflavored by any alcoholic suggestion. To demand strict obedience to the Volstead act, and to be sure that prescriptions are placed only in the hands of favored friends. To arbitrate disputes. To accept praise and worship as his due.

"Let me remind you that the office of dean is for life; no civil service commission can interfere; no legal enactment fix an age limit. Only death can remove him. That suggests the thought that at each annual meeting when he responds as your honored guest, such a response will always be a possible 'Hail and Farewell'. That such a time will be relegated to the remote future with your present dean can and will be positively assured by Pat Hagan and Tommy Clay. These two credulous members of our society are the willing receptacles and eager distributors of the prevalent Scottish joke. A characteristic of the Scotch is thrift. The joke is the exaggeration of this characteristic. Such innocents as Pat and Tommy accept the joke as the real thing, and I am sure they are anxious to prophesy to you that if one Scotsman in order to take advantage of an undertaker's reduction in prices, committed suicide, another Scotsman, with the greater inducement of receiving a dinner that someone else pays for, will fight strenuously to live forever."

"Such occasions as this give us pause; a pause to compare notes; to wonder and rejoice at the progress made in half of a century. The triumph of antiseptics in surgery; of serum treatment in infectious disease; the positive help of the x-ray in assisting accurate diagnosis, and of the laboratory in intelligible pathology; the advances in preventive medicine, and our better knowledge of hygienic conditions. The improved methods in pharmacology simplifying our chemical treatment. A greater sub-division in special branches bringing about a more exhaustive understanding of each specialty assisted by improved instruments.

"Such are some of the most important indications of progress in medical science. We are to be congratulated that we are living in this generation, but let us not forget that medical science is progressive, and that there are yet many knotty problems to solve, and many improvements yet unaccomplished."

## SOMERSET COUNTY.

A. Anderson Lawton, M.D., Reporter.

The Somerset County Medical Society arranged that its spring meeting should be devoted to Public Health work, and, in consequence, held an open session at the Somerville High School, on the evening of June 10; inviting the Visiting Nurses' Association, all health agencies and the public in general to attend. Dr. Henry O. Reik, Editor of the State Medical Journal, delivered an address upon the "Importance of Periodic Physical Examinations in the Preservation of Health", and this was followed by a moving picture film, demonstrating the "Inception and Progress of Pulmonary Tuberculosis"—a film quite understandable by the intelligent layman.

The attendance was small but those present enjoyed the demonstration and will aid in spreading the gospel of health protection.

## HEALTH OFFICERS ASSOCIATION.

### Discussions Continued from June Journal

Mr. Osborne: It is a great advantage for us in this vicinity to be able to have so near at hand men trained in health work and experienced in health administration, who will come along occasionally and assist us in orienting ourselves as to where we should put emphasis in health efforts.

It is perfectly true, as Dr. Emerson has said, at least in my case, that if I had been asked off-hand whether chronic nephritis is increasing or decreasing, knowing that that group of diseases has tremendously increased over what it was 10 or 15 years ago, I would have said of course it was increasing. That chart, which shows that in New York City it is very definitely declining, will send me back to East Orange bent on finding out within 24 hours the exact facts with reference to that disease in our community. His whole discussion, I think, was a very clear lesson to Health Officers of the value of statistical studies and is most suggestive, taken in connection with Dr. Thomson's suggestion that we prepare for physicians facts in the field of preventive medicine and public health. We, as Health Officers in New Jersey, are all registrars of vital statistics. We all have at our hands these vital facts and it means merely enough clerical force or enough interest individually to assemble them, classify them, study them accurately and pass on at least that amount of information to the docors.

Many of us, being laymen in health work in this State, lay no claim to medical knowledge of a curative type. We do know something with reference to preventive medicine and that, it seems to me, is one of the easy ways, as suggested by Dr. Thomson, of obtaining the coöperation of the doctor; give him something that will be useful to him, some information that he as a busy practitioner hasn't had time to discover for himself. I was particularly pleased with Dr. Thomson's suggestion in that connection; a practical one, I believe, of how we can secure the coöperation of physicians. It is not easy to undertake to teach them. They already know disease. They claim, many of them, to know preventive medicine, though as a matter of actual fact some physicians show a disheartening amount



of indifference to certain essential parts of the program.

I was interested recently in hearing from one who has been lecturing upon the value of periodic health examinations that he gets far greater appeal and much more interest from lay groups than he gets from the medical men. That is significant. It is also discouraging. It means that if the periodic health examination program is to be advanced, the Health Officers can perhaps do nothing better than to attempt to stimulate the doctor by indirection, by creating as far as possible real interest on the part of the laymen and have the interest come from that side. As more and more people request an accurate and complete health examination, the doctors must, as a matter of self-preservation, prepare to provide it.

Recently I had the privilege of addressing a group in a church woman's club. The only man in the audience was the minister, and afterward he came up and asked: "Osborne, where can I get a doctor to give me that kind of an examination?" Well, it isn't our province to tell such persons where they can get that kind of an examination other than to say "your family physician". We cannot but believe that, as a result of efforts of the American Medical Association and the State Medical Societies and the local County Societies, doctors will gradually become equipped to give what is known by a great many people, particularly some two or three million men who were physically examined in the Army, as a real physical examination and a true health examination.

How far Health Officers are justified in stimulating interest in that direction through Medical Societies and by the organized profession is not easy to know. We invited 8 or 10 physicians known to have been active in the State Medical Society's program for periodic health examinations to attend this meeting. I hope some are here, I know 2 or 3 came. I believe an advance from them in the nature of an invitation for Health Department officials to coöperate with them might be the means of working out a practical program which would be mutually advantageous. We might even supply some of the services which Dr. Thomson has enumerated in the way of personnel, clerical help and some portion of the expense of popularizing this movement.

Today's subject is somewhat alien to what we ordinarily discuss in our meetings and Dr. Emerson has shown that health departments must give attention to influences affecting the higher age groups. I wonder whether Dr. Josephine Baker's reclassification of a health department's functions is not, after all, entirely logical. She says, you remember, in her latest book on Child Hygiene, that there should be no separate functional bureaus in a Health Department. There should be only 2 divisions—that of Child Hygiene and that of Adult Hygiene—the whole Department supplying services to these main branches. It does seem that our efforts might be so directed; for instance, statistical studies, disease control, food control and other services are common to both age groups. It might be an advantage to emphasize the ages to be served rather than the services.

Dr. Harvey Brown: There seems to be no response from the medical fraternity concerning this periodic health examination, and although I don't differ greatly from Dr. Thomson, I certainly do in some respects.

Geographically, Kings County might be different from Monmouth County and it certainly is different for the health officers and the medical fraternity are not in the habit of fully coöperating in the latter place. It seems to me that the most intelligent Health Officer in Monmouth County can acquire more warm enemies and cool friends than any place I know of, but the point is that we are not in the habit of coöperating in my community. We do have in Monmouth County a practical method for periodic health examinations, where the County Medical Society has formulated a fixed program for that purpose, but the next problem is to sell it and it is mighty difficult to sell.

It seems to me that from the medical standpoint the periodic health examination is a mighty good thing. We have standardized as far as it was possible to do it a program whereby every doctor in the Medical Society could make a periodic health examination and we convinced every doctor whether he was a surgeon, eye specialist or whatever he was, that he was qualified to do it, and I think that they are. This program was formulated with the idea, as Dr. Thomson said, of protecting ourselves in a way and because it is the only thing to do and we are going to put it over.

Now it seems that the advice I could give is that there must be some coöperation between the doctors and Health Officers concerning this periodic health examination and if the Health Officers can sell this to the doctors, it is going to result in a more friendly feeling between them.

Before we adjourn, I would like to make a motion concerning the type of meeting that we have had up until this time. As spokesman for the Health Officers Association, those that are left at least, I want to express the opinion of the Association that the Chairman of the Executive Committee has done very well in the matter of the character and the type of this program. I want to move that we give a vote, by acclamation, of thanks to the Prudential Insurance Company for their kindness in bringing us before them and also that the Secretary be authorized to write such a letter to the Prudential Insurance Company.

Dr. Crankshaw: The papers by Dr. Patton on cardiovascular disease and by Dr. Emerson on the degenerative diseases are rounded out by the paper of Dr. Thomson on periodic health examinations.

In these days when we contemplate the aeroplane, the machinery required in sea-going vessels, the locomotive, the automobile, the time-piece or any fine piece of mechanism, we certainly would not get the idea that such mechanism could go far without very minute inspection, not only periodically but very often, and I think one of the biggest things today in medicine is preventive medicine. What's the use of waiting for a person to get down in bed and then dose him tremendously, when if we can teach people by education how to take care of their bodies, how to take care of themselves, and request a periodic health examination, we are going to have longer life, we are going to have more health and happiness and the world is going to be a better place to live in. Isaak Walton said, "If you have good health, thank God; and value it next to a good conscience."

I have used the expression more than once that life is not only to live but to be well, and when

(Continued on page xxviii.)

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## RECENT ADVANCES IN OBSTETRICS.

P. BROOKE BLAND, M.D.,

Department of Obstetrics, Jefferson Medical  
College, Philadelphia.

Read at the regular meeting of the Gloucester  
County Medical Society, Woodbury,  
N. J., March 18, 1926.)

The title of this paper may be somewhat misleading, if not disappointing, especially if one were to interpret the topic as an indication that advances of an altogether unusual nature have been made. The words of the title must be used in a relative sense, since much that may appear old to men in active obstetric work, may appear new, or at least not wholly familiar, to men in general practice.

While it is exceedingly important to broadcast new or recent events, it may be still more important to direct attention to and emphasize the conclusions reached regarding certain measures which time and experience have cemented on a logical foundation. It is only by the crucial test of time, the best of all tests, that new discoveries or methods can be properly evaluated. Obstetrics verily is as old as life itself, but the science and art of this branch of medicine one may regard as of modern origin. No other department of medical science can boast of or rather bewail the same long dark centuries through which it has passed with its incomputable toll of human life.

One can not speak of the revival of obstetrics or refer to an obstetric renaissance, but most that is relatively new in obstetrics has developed within the past 40 years.

Modern obstetrics must be regarded truly as a real, major surgical problem, but to no other problem in practice have such minor, if not indifferent, methods been applied. In recent years prevention has occupied a regal position in all branches of medicine, so much so that the science in general one might regard as devoted largely to preventive means. Gradually, obstetrics is ascending to its proper place with its sister branches and the profession at last, though tardily enough, is beginning to realize that in obstetrics one finds the greatest of all opportunities to profit by prophylactic practice.

### *Fetal Mortality.*

During the year 1923, 138,259 babies died in this country before they reached the age of 1 year and the majority of these succumbed during the first 4 weeks of neonatal life. During the same period there occurred 69,757 still-births or a total fetal death list of 208,016. Some writers claim the mortality of newborn babies, including still-births, will total 300,000 annually.

From a study of the causes of fetal mortality, it is obvious that more than 50% of the deaths are wholly unnecessary. Eardley Holland, in an examination of 300 fetuses, respecting fetal death, found more were killed by the complications of labor than died during pregnancy from maternal or placental disease. In a rough estimate of the number of babies who died, Holland claims at least 52% might have been saved; 20% by antenatal treatment, including 16% of syphilitic fetuses; 20% by

better technical means in treating the complications of labor, and 12% by a combination of improved antenatal and intranatal methods of treatment.

In a study of the causes of fetal death, Holland was especially impressed by two conditions, namely: syphilis and excessive cranial stress, the first because of its low incidence and the second, because of its unexpected importance.

Among the 300 fetuses studied there were only forty-two cases of proved syphilis and six of probable syphilis or sixteen per cent. in all. There were fourteen cases of possible syphilis, though there were no frank signs of this disease in the fetuses or in the placentae. Of 167 fresh fetuses examined, the tentorium was found lacerated in 81, or 48%, and this lesion was associated with laceration of the falx cerebri in five cases. Sub dural hemorrhage was found in all but six. Of the 81 fetuses mentioned, 46 were delivered by the head and 35 by the breech.

In enumerating the causes of death of 300 cases reported by Holland, 16% of which were due to syphilis, 10% to toxemia and 51% to complications of labor, including antepartum hemorrhage, it is observed that nearly 80% of the deaths may be included in the realm of prevention.

#### *Maternal Mortality.*

The obstetric mortality, unfortunately, is not limited to the fetus alone. The toll taken in maternal deaths is almost staggering, to say nothing of the maternal morbidity. The yearly maternal death rate from childbirth in this county is comparable to the destruction of a city of considerable size and of a city wholly composed of individuals of mature and useful years.

It is estimated that 16,000 women die every year in America from childbirth, and Asa B. Davis believes this estimate is far too low. DeLee states that more than 25,000 women die in this country every year from the effects of pregnancy and labor and that thousands of others are compelled to seek hospital treatment for the correction of parturitional damage. It is claimed that 6000 women die from septic infection, 5000 from eclampsia and 4000

from hemorrhage. Is it not safe to assert that 25% or more of these should be protected from serious damage or saved from death? Asa B. Davis, in his presidential address, read before the last meeting of the American Association of Obstetricians, Gynecologists and Abdominal Surgeons, stated that 25% of the disabilities and deaths incident to childbirth are wholly unnecessary.

If the foregoing statements can be accepted, and there seems no valid reason why they should not be, it is obvious that the obstetric morbidity and the obstetric mortality are due to a weak obstetric policy. From a study of published figures, it is evident that a weak policy is not limited to any country, but is more or less universal. In Great Britain the obstetric death rate ranks on a par with that in this country. In America, with a birth rate approaching almost two million, 25,000 mothers succumb every year. In England and Wales, with an annual birth rate of 700,000, about 3000 mothers succumb. During the past 10 years there has been a material reduction in the fetal mortality, but the maternal mortality has remained unchanged. Between the ages of 15 and 45 the death rate from childbirth stands third, and one-half of these deaths, it has been found, are caused by sepsis.

In selecting material for this paper I may be accused of presenting features which are generally well known, but from the manner of certain phases of obstetric practice one feels that some of the material which I have included is not known at all. It is at the risk or courting criticism that I venture on a reiteration of special features of obstetric work, features generally familiar, though not generally adopted or followed.

#### *Antenatal Care.*

It has been well said that antenatal care is the strategy of obstetrics no one can deny that by the conscientious observance of antenatal methods one may greatly reduce intranatal complications. I am quite sure that most of the complications arising intranatally are the direct result of somebody blundering in antenatal study.

Studdiford, from studies made in the Antenatal Clinic of the Sloane Hospital, is convinced that prenatal supervision results in a



great saving of life and paves the way for easier and safer deliveries. From a study made of all patients passing through the Sloane Antenatal Clinic, it was found that 17% required special prenatal care. In the Sloane Hospital there were delivered consecutively 3640 patients with 157 still-births. These still-births emphasize the value of antenatal treatment because the mothers who gave birth to the still-born babies received very little, if any, prenatal study. An analysis of these patients discloses that 61 were admitted as emergencies, 38 had been under observation less than 2 months, and 57 were under observation 2 months or more.

Bourne claims that the tremendous number of women disabled by pregnancy and labor, especially by the first labor, can be prevented by the practice of antenatal care. This writer also believes that it is the chief office of the accoucheur to ensure a woman who gives birth to a child the same degree of health she enjoyed before her pregnancy began. Reference is not made in this paper to antenatal work because it is new, or because of its practical utility in obstetrics, but chiefly because sound obstetric work can not be carried on without a substantial guide. This is provided by conscientious antenatal care and if it is not conscientious it is worse than no care at all. Simply to see a prospective mother every 4 weeks, a mother preparing herself for one of the most sublime, yet at the same time one of the most trying ordeals of the human body, is not enough nor anywhere near enough. A general physical examination, both external and internal, should be made every 4 weeks (more frequently, if necessary) during the first 28 weeks of pregnancy, and thereafter every week up to the thirty-sixth week. After this time unless there be some special indication, the examination should be limited to the abdomen and rectum, not vagina. Routine blood pressure readings should be made and a rise above 140 systolic, should call for more scrutinizing study. This, together with a conscience clear urinalysis, should be made. Failure in these 2 simple expedients may expose the prospective mother and her baby to real danger or even a double fatality.

The "sink test", so often referred to wag-

gishly, is a serious indictment against the individual who is second party to a serious obligation. He is only protected by the ethics of the profession, an ethical standard set up largely in the interest of a derelict physician, rarely in the interest of his victim. I have had occasion to see the "sink test" in operation, exemplified in an array of decomposing specimens decorating a doctor's washstand. A sink, according to Webster, is defined as "the lowest part of a closed basin whence the water of one or more streams escapes by evaporation". To practice obstetrics on this basis or basin is not good practice and if it is not good, it must be utterly bad.

I have already stated that 5000 women, at least, die every year in this country from toxemia. I am not unmindful of the fact that a small percentage of toxemias will slip by despite any known method of antenatal investigation, but I am equally confident that the majority of the toxemic deaths reported are wholly unnecessary. A simple routine study of the blood pressure, combined with a routine urinary analysis is sufficient to cut the figures quoted from several thousand to a few hundred. The fundamental value of routine urinary examinations and blood pressure studies is only realized when a dire calamity results.

*The Wassermann Reaction.*—This method of investigation has become a recognized procedure of obstetric practice and it has been demonstrated conclusively that the reaction is positive in 95% of mothers delivered of syphilitic fetuses. Brown, according to Bourne, has never observed a negative maternal reaction in mothers giving birth to fetuses in whom the spirochetes were found. The examination should be made in all cases of repeated abortion or if there are other reasons to believe in the existence of maternal syphilitic infection. The reaction is now regularly practiced in all well conducted maternity hospitals and it is probable the test will become a routine examination in general practice, as well. By this mode of investigation combined with appropriate treatment, Polak has been able to reduce the rate of still-births in the Long Island College Hospital to almost nil.

*Pelvimetry.*—Pelvic mensuration has been

taught for years, but this essential feature of obstetric art is so woefully ignored as to make one sometimes wonder if it ever constituted a part of obstetric instruction. To practice scientific obstetrics without routinely determining the diameters of the pelvis is comparable to an attempt to navigate the seven seas without a compass. It is here too, as in acquiring a liability insurance policy after a medical disaster, that pelvic mensuration is not appreciated until a lamentable catastrophe occurs.

The value of discriminating antenatal care is so well set forth in a recent contribution by Bourne that it will pay all who run to read. This author reports 409 cases of labor in contracted pelves showing a fetal mortality of 52% in patients not receiving antenatal care and a fetal mortality of only 12% in patients in whom antenatal care was instituted. Bourne found that those patients coming to labor at term without prenatal study carried a fetal mortality 4 times greater than those in whom antenatal measures had been adopted.

One of the outstanding examples of the importance of antenatal supervision is, already indicated, the recognition and treatment of syphilis. Investigation has proved conclusively that the prompt recognition and equally prompt treatment of syphilitic disease, even if treatment be administered in the latter weeks of gestation, may wholly prevent the disease in the fetus. As regards the treatment of syphilis antenatally, Studdiford claims that in his clinic good results invariably followed active therapy irrespective of the time in pregnancy the treatment was instituted. Bourne regards this, the prenatal treatment of syphilitic disease, as one of the chief triumphs of preventive medicine in obstetrics.

*Antenatal Care and the Toxemias.*—Reference has already been made to the value of antenatal supervision with regard to the recognition and therapy of the toxemias. As a matter of emphasis, I shall, at this time, add a few words. Occasionally, owing to the subtle nature of certain forms of toxemia, a few cases may elude the most painstaking physician, but, on the whole, what has been said regarding conceptional syphilis applies equally to the toxemias.

*Antisepsis and Asepsis.*—It may not sound euphonious to extol the virtue of Listerism, a measure now more than a half century old, in its application to obstetric practice. However, I am familiar with no department of medicine in which antisepsis and asepsis are more imperatively indicated, yet so meagerly practiced.

Prior to the adoption of this transcendent asset of the obstetrician, the mortality in the maternity hospitals of Paris was 12%. With the adoption of antisepsis, in 1889 to 1898 the mortality fell to 0.69% and with the adoption of asepsis in 1898-1908, it decreased to 0.29%.

*Antenatal Care and Intranatal Complications.*—Certainly no one will question the value afforded by antenatal examination in aiding one in recognizing disproportion and malposition and in enabling one, therefore, to adopt proper antenatal or intranatal methods (the tactics of obstetrics), effecting safe delivery.

Obstetric practice is a major surgical problem, but rarely in general obstetric work are sound major surgical principles adopted and rigorously followed. It is estimated that in this country 6000 women die annually of septicemic infection. The vast number who become infected but do not die, though rendered more or less physically disabled, is almost beyond estimation. With regard to mortality and morbidity, septic infection stands in the foremost rank. It is only when the extraordinary susceptibility of parturient women to infection is appreciated, combined with the institution of an antiseptic and aseptic regime and the routine use of the rubber glove, literally the hand maiden of the obstetrician, provided by Halsted 33 years ago, will the tragedies of septic infection be overcome.

*Rectal Examination.*—I am confident most observers agree that the common practice of routine vaginal examination, is not only dangerous but rarely necessary. I am persuaded also that one is able to garner all necessary knowledge by abdominal and rectal examination. The rectal method of manipulation, moreover, affords as much information as the vaginal procedure without the dangers this method entails. In the last 300 consecutive deliveries in the Jefferson Maternity only 1 vaginal examination was made. Even in this



case, I believe, the measure was not an advantage, but an encumbrance. Rectal examination, advocated 100 years ago, according to Meigs, by Velpeau, was resurrected in this country by Ries in 1893, and about the same time by Krönig, of Freiberg, Germany. Velpeau, in the fourth edition of his textbook on midwifery, translated by Charles D. Meigs in 1831, said: "Among other thing I have endeavored to show the advantages of touching by the rectum, as well as of abdominal exploration, in a vast number of cases". It was not until the introduction of the rubber glove, however, that wider interest in the method was aroused. Here in the east, rectal examination has not been given due recognition, but in the middle west, and beyond, it is the examination of choice. In certain maternity hospitals bordering on the Pacific slope vaginal examinations are not permitted, especially by the resident interns. In no patient is the vaginal examination made outside of the delivery room and then only after the most careful preparation of both patient and attendant. Thus far I have said very little, if anything new, regarding "recent advances in obstetrics". I have only tried to reiterate or reemphasize old truths, but truths nevertheless, which are not fully appreciated and less tardily practiced.

#### *Chemical Analysis of the Blood and Urine.*

A great deal of investigation of the blood and urine has been carried on with respect to the early recognition of pregnancy and its complications. In this paper reference will be made only to certain procedures of proved practical utility.

As a means of diagnosis, especially with regard to the toxemias, chemical examination of the blood has evoked wide spread interest, but, except in a few instances, thus far no logical deductions have been forthcoming. The test devised by Van den Bergh is of real diagnostic value and, when positive, indicates definite biliary obstruction or altered hepatic function and structure. This test we have found of real worth in the diagnosis of toxemias of hepatic origin. The Rosenthal test designed to determine liver derangement has also proved of real value in differentiating neurotic from true organic vomiting of preg-

nancy. In the study of a large series of cases, Krebs and Dieckman claim the Rosenthal method will reveal impending toxemia and that it is of unusual value as a method of differentiating neurotic from pernicious vomiting. They find it, also, of value as a means of determining the functional capacity of the liver under the stress of pregnancy.

It has long been known that in pregnancy carbohydrate metabolism is in some way disturbed, but the precise factors influential in the alternation are not understood. Metabolic imbalance with the tendency to glycosuria in pregnancy has been employed as a means of diagnosis in the early weeks of gestation, especially in those patients in whom the clinical signs are not clear. Investigation has shown that the metabolic phenomena which provoke glycosuria occur early in pregnancy, so much so that the biochemist regards glycosuria as one of the earliest changes taking place in this condition. It has been demonstrated conclusively that glycosuria will arise in a large number of pregnant women during the earliest weeks of gestation, if 50 to 100 gm. of glucose are administered. Crook, according to Bourne, studied 548 patients, and found that 166, or 30%, had sugar, other than lactose, in the urine.

*The Toxemias.*—At this time, I should like to refer to the toxemias of pregnancy, particularly to the so-called preëclampsia and to eclampsia itself. Reference has already been made to eclampsia as a preventable disease and this type of toxemia is now described in all text-books as preëclampsia, (including cases of albuminuria, edema, hypertension, blurred vision, scanty urine) and eclampsia proper. I have already stated that an occasional case of fulminant eclampsia with prodromes of an exceedingly subtle type or no prodromes at all may evade the most conscientious study, but the majority of cases present a clinical picture of distinction and hence should not slip by. It has been demonstrated that by a simple conservative plan, including rest, simple feeding, moderate fluid intake, free elimination and a salt-free diet, the convulsive stage of this obstetric tragedy can be almost wholly eliminated. Heretofore, the therapy of eclampsia itself has been of

an exceedingly variable character and even today there is not an unanimity of opinion respecting the course to be adopted. Opinion gradually is crystalizing in the form of the conservative plan and no longer is the disease regarded as an obstetric emergency or treated as such. There still exist two schools, however, one with a small corps and the other with a large and growing corps of teachers, the one advocating prompt and rapid termination of pregnancy and the other favoring an expectant medical course. From a study of the most recent literature, it is obvious that the school advocating conservatism is most popular. Personally, if I were asked to join forces with either, I should without hesitation matriculate in the conservative school.

Recently, de Wesselow and Wyatt reported 2000 collected cases of eclampsia. The different types of treatment with the results obtained thereby are shown in the following table:

Treatment	Mortality Mild Cases	Mortality Severe Cases
Natural delivery	4.5 %	36.9 %
Assisted delivery	5.6 %	31.7 %
Induction	6.6 %	26.4 %
Cesarean section	11.3 %	46.3 %
Accouchement Forcé	18.1 %	63.1 %

The figures presented in this table confirm the growing conviction that the less done to hasten delivery the better the prognosis. The table also shows that accouchement forcé, no longer practiced in America, should be definitely eliminated as a therapeutic recourse.

Stander says the mortality of eclampsia in the Obstetrical Department of Johns Hopkins Hospital has been reduced 50% by the expectant plan. Wilson refers to 247 cases of eclampsia treated in the Johns Hopkins Hospital from its opening in 1894 to 1924.

The cases are divided into 2 groups. The first comprised 110 cases and they were treated by the methods in vogue at that time, with 21 deaths or a mortality of 24.8%. The second group, treated along more conservative lines, comprised 137 cases with 14 deaths or a mortality of 12.8%. Wilson claims that the end-results under the conservative plan are twice as good as the more radical forms of treatment formerly practiced.

De Wesselow and Wyatt refer to another series of 2000 cases treated by expectant means

with a mortality of 9.8%. These writers included in their analysis 230 cases last recorded by Stroganoff, with a death rate of 1.7% and also 204 cases treated in the Rotunda Hospital, Dublin, with a mortality of 10.29%. Professor Stroganoff reports his last series of 80 cases without a single death.

For some time there has appeared in the literature repeated reference to the value of magnesium sulphate in the treatment of eclampsia, administered either intramuscularly, intravenously or intraspinally. All the reports presented seem to indicate that magnesium sulphate is of real service. It is administered in from 25 to 50% solution and as much as 100 c.c. have been given within 20 hours without disquieting effects. It is claimed that the material will: (a) control convulsions, (b) provide relaxation, (c) decrease intracranial pressure by overcoming edema, (d) stimulate diuresis, (e) diminish general edema.

Quite recently Dorsett reported 38 cases of eclampsia treated with magnesium sulphate with 2 maternal deaths, one on the tenth day from cerebral hemorrhage and the other in a patient moribund on admission to the hospital. In the series there were 9 fetal deaths, 1 from forceps trauma, 4 fetuses were macerated, and 4 were premature, weighing under 1300 gm. The convulsions in the series of cases reported ranged from 1 to 28 and these were wholly controlled in 10 patients and reduced from 50 to 75% in the remainder. Dorsett administers the drug intramuscularly and he uses a 25% solution. His average dose is 15 c.c.

Lazard treated 17 cases of ante, intra and postpartum eclampsia by the intravenous injection of 20 c.c. of a 10% solution of magnesium sulphate, and he states the results were uniformly successful. Lazard claims that this form of therapy will control "convulsions", clear up "coma", promote "diuresis" and overcome "edema". From 1 to 3 injections were made and at intervals of from 2 to 4 hours. After the adoption of this method of treatment, supplementary therapy, like gastro-intestinal lavage, phlebotomy and catharsis was gradually abandoned.

Alton and Lincoln, working along the lines suggested by Haubold and Meltzer, used mag-



nesium sulphate intraspinally in a small number of cases and the results, they claim, were most encouraging. They recommend a 25% solution and the administration of 1 c.c. to each 25 lb. of body weight. In case of respiratory failure following an overdose of magnesium sulphate, 10 c.c. of a 25% solution of calcium chlorid should be given intravenously. This is said to have a balancing effect on the magnesium salt.

*The Obstetric Forceps.*—Of all utility instruments, the forceps is by far most widely used. It might be said that in some hands it is used too widely, while in others it may not be used widely enough. The instrument had its conception in the brain of Peter Chamberlen, a London physician of Huguenot ancestry, in the latter part of the sixteenth or very early in the seventeenth century. Owing to the invention being kept a family secret, it did not become widely known until 100 years later, or in 1813, when 3 forceps were found in an old chest in a house in which members of the Chamberlen family at one time resided. These 3 implements, it is believed, belonged to the Chamberlens and were the forceps which the various members of the family had employed. After the design of the instrument became public property, modification began and it has been modified, metaphorically, by almost every obstetrician, both great and small, ever since. Recently, 2 modifications have been placed before the profession, 1 in 1915 by Kielland, of Norway, and 1 in 1923, by Barton, of Plattsberg, New York. These implements are said to be of special value in application to the head high in the pelvis and presenting in the transverse or nearly transverse diameter of the inlet. The Kielland instrument is also used by some accoucheurs in posterior rotation of the occiput and it is said to be of real service with the occiput in this position. The general feeling regarding the application of forceps to the head "high" in the pelvis is not one of approval. Personally, I regard a high forceps delivery one of the most difficult, as well as one of the most dangerous operations for both mother and child. I look upon this procedure as so dangerous, that I adopt the recourse only under the most exceptional circumstances. With

the mother and child in good condition, an elective cesarean section, I feel, offers infinitely more for both. The "high" application of the obstetric forceps should have, in my judgment, a very limited field of usefulness in obstetric practice.

More and more dangers, both maternal and fetal, of this operation are becoming realized. Unquestionably the forceps operation should be limited, on the whole, to the medium or low application. Even the frequency of the medium operation may be greatly reduced, if one only remembers that a head able to reach midpelvis is likewise able to reach the pelvic floor. Hence, in the great majority of cases, the application of forceps may be restricted to the low operation.

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### *Cesarean Section.*

This paper I would regard incomplete without referring to a method of delivery which has gained wide popularity, perhaps too wide a popularity, within the past few years. I allude to the operation of cesarean section. The operation dates back to antiquity, though it did not become an established obstetric procedure until the early part of the fifteenth century. In even mentioning this operation I may be accused of going far afield in search of material for a paper which is supposed to embody recent advances in obstetrics. The operation of cesarean section, first placed on a rational basis by Sanger in 1882, and developed to a standard of modernity during the life time of most men here assembled, may be regarded, therefore, as of comparatively recent origin. My excuse for including this phase of obstetric surgery in this paper is founded on the fallacious assumption that abdominal delivery is not fraught with more danger, both from the aspect of morbidity and mortality, than the ordinary clear abdominal section. I am familiar with no conception so erroneous or one that is less substantiated by sound surgical experience. A competent surgeon may perform several hundred clean abdominal operations without an alarming morbidity or even without a fatality. Deaver has performed several hundred consecutive appendectomies without a death, and Montgomery has performed his method of shortening the round ligaments

more than 400 times consecutively with similar results.

No figures relating to the morbidity and mortality of cesarean section of a like nature have ever been reported and it is altogether likely no figures ever will. That the operation is associated with a mortality infinitely greater than that following simple abdominal surgery is confirmed by the investigation of the committee on infant welfare of the Massachusetts Medical Society. A report submitted by this committee discloses that the maternal mortality in the state of Massachusetts in 1920 was greater than in 1910, and that as a cause of death cesarean section ranked second to septic infection. Holland reports the mortality figures of 37 British hospitals with a series of 4197 sections carrying a mortality of 4%. Eden and Holland present a table in which the operation was performed for contracted pelvis as follows:

When Performed	Total Cases	Mortality
Not in labor.....	1189	1.4 %
Early in labor.....	384	1.08 %
Late in labor.....	213	9.4 %
After induction.....	35	14 %
After attempts at for- ceps delivery, etc..	102	26.5 %

Perhaps no operation in obstetric surgery is performed on so slight a pretext.

### *Septic Infection.*

I wish to refer briefly to the present conception regarding the etiology and the therapy of puerperal sepsis. It is now generally conceded that in a small percentage of cases, infection may arise from within. In the vast majority of cases the source of the infection organism is indubitably from without and hence, in the vast majority septic infection is a preventable disease. To the preventive measures brief reference has already been made.

Recently a great deal of attention has been given to the revival of sterilization of the blood stream by the intravenous administration of antiseptics. Of the many antiseptics used mercurochrome is the most recent and has gained widest popularity. Unfortunately this drug, like other antiseptic preparations administered intravenously during the past 25 years, has

not, as it was cherishingly hoped, increased our optimism regarding the successful treatment of puerperal infection. Extended investigation has not supported the view of the sponsors of this method of medication. The most efficient recourse seems to reside, first in the means of prevention, and second, in giving the infected patient a chance to get well without too much meddlesome therapy.

Kochler, who has recently presented a survey of the subject in an excellent monograph covering more than 200 pages, expresses the opinion that a rational therapy of puerperal infection is not forthcoming. In his hands curative methods, based on the introduction of antiseptics, foreign proteins or sera into the blood, have proved unavailing. Convincingly good results, he says, can not be proved for any form of therapy so far suggested and tried. From a careful study of his own experience combined with a critical study of the literature, Koehler says that at present we are unable to cure patients suffering with puerperal infection by specific means.

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## MASKED TUBERCULOSIS.

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For some time past, the medical profession has been the target for lay, and semi-lay, organizations, which have contended that the indifferent and, more often, careless examination of patients has, in many instances, been the cause of much unrecognized tuberculosis. As a matter of fact, we have been called upon, very frequently, to emphasize the position the profession has occupied in relation to the now very popular movement of tuberculosis control.

That tuberculosis is very frequently unrecognized is, of course, a well known fact for which the profession, as a whole, cannot be held responsible. The hospitals and, we might add, the medical schools of our country, have, to a large extent, helped to create this situation; the one, for failing to teach its students the essentials and fundamentals in the etiology, diagnosis and personal touch; the other, by perpetuating a "closed door policy", that is, by having different standards for admission of the tuberculous and the syphilitic; thus, the intern and the medical student have no opportunity to come in contact with tuberculosis at the critical part of their medical career.

We have selected for our discussion this evening a subject which practical experience has taught us to be most important in connection with the diagnosis of tuberculosis; we have decided to discuss the *symptomatology of conditions*, that are often the cause of our apparent inability to promptly recognize tuberculosis.

Patients who come to us with the classical symptoms, to wit, night sweats, pain in chest, cough and the other well known symptoms of pulmonary tuberculosis, will, of course, immediately direct our attention to the possibility of the existence of tuberculosis, but, we have in mind, rather, that type of case so frequently seen where the predominating symptoms are, directly or indirectly, associated with or related to other conditions or organs

than the existing symptoms would indicate, and where the possibility of existence of tuberculosis is overlooked entirely. This condition might best be described as "masked", or "concealed" tuberculosis, and in order that this subject might be best presented, permit us to consider such symptoms in groups, that is, appertaining to systems or organs. First among these symptoms are the fevers, of which there are 2 distinct types:

(a) Fever, which may mask a beginning tuberculosis; continued or typhoid fever type. It can, of course be readily understood, how difficult a differential diagnosis between typhoid fever and certain types of acute miliary tuberculosis may become. We have been confronted with such difficulty in a series of cases; in the first instance, the positive Widal reaction is of material assistance; if however, such test is negative and, after a week of continued fever, no roseola appears, hidden or masked tuberculosis might be considered; this occurs very frequently, even though typhoid fever is now relatively rare.

(b) Intermittent, or cyclic fever (pseudomalarial).

In phthisis, depending upon the extent and severity of the lesion, of course, we have more or less fever of prolonged character. This, however, very frequently escapes attention of the medical attendant, particularly where thermometric observations are not made the rule; which is so often the case in private practice where nursing service is not available. This intermittent type of fever is very frequently mistaken for malaria; in fact malaria and rheumatism are the 2 conditions mentioned (according to their relative frequency) which are the most common cause for errors in relation to the diagnosis of tuberculosis. When histories are carefully observed, the type of fever which is so characteristic of malaria will help to make the diagnosis without resorting to the laboratory, where, of course, the presence or absence of the plasmodium will definitely settle the question. In territories where little real malaria is known to exist, we should have little difficulty, but the frequent diagnosis of malaria, prompts the stressing of this point.

In the second group heart symptoms pre-

vail. These may be subjective or objective and are developed because of the existence of hidden foci of tuberculosis. Most important among these symptoms are the palpitations. The patient consults his physician because of these embarrassing palpitations and is most anxious to ascertain the type of cardiac disease responsible for said symptomatology. Careful physical examination does not reveal any organic (cardiac) disturbance; what then? We have an absolutely normal heart, pulsating against an inflamed or greatly thickened pleura and pericardium, which hinder or embarrass the regular function of the heart; an apparent cardiac lesion caused by tuberculosis. In this connection, it is well to remember that pain in the precordia, which is sometimes as severe as in a true angina pectoris, often owes its origin to tuberculosis, for tuberculosis pericarditis is by no means a rare condition and is the cause of these very painful symptoms that have been alluded to.

We next find the condition where a beginning tuberculosis is masked as an affection of the digestive and alimentary tract. This is, perhaps, one of the most frequent and intensely interesting conditions which confront us. Here, we have in mind the patient who refers his entire syndrome to gastric and intestinal disturbances—pain in the abdomen—and such symptoms have very often caused the diagnosis of ulcer (gastric or duodenal) or even appendicitis or cholecystitis, whereas a careful examination might reveal a rather common glandular mesentery tuberculosis. In these cases we have to be very careful in our examination and deductions and resort to all agencies and facilities that might help us to exclude the existence of ulcer; to wit, examination of secretions, motility of the stomach, presence or absence of occult melena and, finally, the use of the x-rays. If there is no evidence of ulcer, we must seriously consider the possibility of tuberculosis, particularly if there be suspicion of a pulmonary lesion. This is important to the physician, for if there is no ulcer we need not be careful of the kind of diet; quite to the contrary, if tuberculosis is present, we permit our patient a most liberal and generous diet. In passing, we must pay our respects to those annoying dyspepsias which are so frequently treated as such, when,

as a matter of fact, they are really manifestations of tuberculous toxemias. These are very often met with and are the cause of sending many of our tuberculous patients to the gastro-enterologist who treats such cases for years, at times, only to find, greatly to his chargin, the cause to be in the toxins of the tubercle bacillus.

We next come to consider rheumatism. When we speak of rheumatism, we have not in mind that type which is so-called because of painful conditions of bones or joints that have not been classified or diagnosed, but simply for convenience sake thus designated, but the typical rheumatism, with pain, redness, tenderness, and swelling of the joints, which very frequently mask a tuberculous origin. Therefore, in every case of rheumatism, particularly where there is no evidence of endocardial complications, we must think of the possibility of existing tuberculosis. In this connection, we must remember at the same time that syphilis may present the same sort of clinical picture and we must be prepared to differentiate.

In our systemic consideration we next come to the group of nervous symptoms and manifestations, behind which there often lurk evidences of hidden or masked tuberculosis; most notable among them is neurasthenia, which owes its origin to a weakened central nervous system (to which human flesh may be heir) or else is caused by reason of strain of body or mind, through overwork, worry or disturbed sleep. If the anamnesis does not indicate any of the above named circumstances, one must consider the various other conditions which may be responsible. Such symptoms may be the accompaniment of syphilis, carcinoma or diabetes, but are very frequently early manifestations of a beginning tuberculosis.

May we, in passing, call attention to recent observations which would indicate that a subject with what might be called neurasthenic tendencies may become an easy prey to tuberculosis. It is a common observation that these so-called "nervous manifestations" assert themselves in the early stages of tuberculosis. It might have been mentioned that this so-called "less resistant nervous system" has caused the German school to ascribe to it the



reason for the more frequent occurrence of juvenile tuberculosis in the female.

Another prominent nervous manifestation, deserving mention in this connection, is headache; frequently a beginning serous tubercular meningitis is heralded in with headache; this may be due to miliary tuberculosis of the meninges or to absorption of toxins through the meninges.

We cannot discuss all of the nervous manifestations in connection with tuberculosis but we do feel that this chapter would not be complete without emphasizing the frequency of the connection of tuberculosis with dementia praecox. In a very exhaustive study, by Loew, it has been shown, in one of the large hospitals for the insane, that tuberculosis occurs with dementia praecox in 59%, with epilepsy in 27.1%, with progressive paralysis in 11.3%, and with senile dementia in 10% of the cases that come to autopsy.

We cannot discuss this subject without calling attention to the relation of the endocrine glands and tuberculosis. The teachings of Neuser, of Vienna, but a short time ago were that the presence of goiter negated the existence of tuberculosis. This, of course, was a most important declaration, particularly when we consider a certain similarity of some of the subjective symptoms; to wit, sweating, subnormal temperature and loss of weight, existing for instance in Basedow's disease. Thus it was, for a time at least, that we taught that tremor or positive Goetsch reaction confirmed the presence of goiter and negated the existence of tuberculosis. You probably remember that but a few years ago we injected 0.5 c.c. of adrenalin, for the purpose of diagnosis; if thyrotoxic symptoms were exaggerated, hyperthyroidism was diagnosed. But recent observations have changed the opinion then held, for now we know of the co-existence of tuberculosis and goiter and, furthermore, we have observed that the presence of tuberculosis, makes the prognosis in diseased goiter more favorable, if anything.

Other tuberculous manifestations are found in connection with the adrenals. We have had the rare opportunity of seeing tubercle in the hypophysis, at autopsy. Whether glycosuria, which is frequently seen in conjunction with

tuberculosis, has any connection with these glands, the hypophyseal thyroid or the pancreas, we cannot definitely determine. We do know that we frequently find glycosuria that suddenly disappears and the patient does not feel well, and careful examination reveals manifest tuberculous disease; this is a very frequent circumstance.

Finally, there are the gonads, in which we frequently have evidence of marked tuberculosis. Here we recall the fact of the peculiar pigmentation of a certain type of woman that remind us of chloasma uterinum.

In our survey, we come next to this observation, briefly stated, that there exists a tuberculous albuminuria and that the appearance of this albumin in the urine is periodic, disappearing, very frequently, when a thorough rest cure is instituted; the albumin disappears but is called forth again upon prolonged bodily exertion. But not alone albuminurias without casts but some types of nephritis which owe their origin to a tuberculous focus, which, in their early stages do not show any traces of bacillary invasion, are mentioned because their tuberculous origin is frequently not considered.

Our observations, likewise, lead us to the inevitable conclusion that what is ordinarily recognized as a symptom complex of a simple anemia will very frequently harbor a masked, or beginning tuberculosis. The story is like this, particularly in the young. The child becomes pale and listless, refuses to play, refuses to eat, becomes picky, complains of headache and malaise. The child is sent to the country or sanatorium and there, very frequently, recuperates; upon its return is lively, and apparently, all is well; the explanations therefore, are various; either school anemia, or else over taxation because of attendance at school, or, perhaps, it may be ascribed to a moody child. This condition has often been designated as a pretuberculous state (whatever that might mean) but very rarely is the real diagnosis made, or, if made, is pronounced bronchial gland or hilus tuberculosis.

Again, at a later period, among females, a diagnosis of chlorosis is often made, because they exhibit anemia together with a peculiar pasty appearance. Internally, we find abnor-

malities of growth, infantilism, late appearance of menstrual period, or otherwise, a frequent absence of the same. They exhibit physical and psychic sexual retrogression and development and with an underdeveloped uterus, which, if impregnated at such a time very often causes spontaneous abortion, for, next to syphilis, tuberculosis is the most frequent cause for spontaneous abortion. We know that absence of menstruation is indicative of markedly advanced condition (in tuberculosis) of the female. Then, too, it might be borne in mind that, in the female, where there is no gynecologic evidence for the sudden appearance of amenorrhea, a tuberculosis ought to be suspected and a thorough physical examination is indicated.

Menorrhagia is very frequently the forerunner of tuberculosis of the kidney; it occurs when all other symptoms are wanting, therefore, in the presence of menorrhagia, one ought not to satisfy himself with a single examination of sedimented urine, for frequent examinations of such urine will, with a surprising frequency, demonstrate the presence of the tubercle bacillus. A most interesting observation was made by Novak, who reported curetting in 30 cases of amenorrhea and the existence of tubercle bacilli in the endometrium of 6 of these.

Thus, we have noted groups of various manifestations of illness which may mask a tuberculous condition. Time did not permit of more than a casual mentioning of the more important conditions. We have endeavored to bring to notice some conditions that are fairly well established and to keep free from speculative diagnosis. We have been thinking of physical signs, in our ability to make a sure diagnosis and we have endeavored to show that physical signs are frequently not in keeping with the pathologic development and that lesions cannot always be recognized by physical signs. The important thing for us to remember is that tuberculosis, as it manifests itself clinically, has usually been present for a long time without having any manifestations which have been recognized, but that if we find something in the individual patient which is somewhat suspicious, if we go into the history, we will often be able to locate the paths

of infection. In other words tuberculosis is a chronic illness, a relapsing infection, with periods of activity and periods of quiescence, stretching over a period of months and years when, finally, it is recognized.

In discussing occult or hidden tuberculosis we have purposely discussed this problem from the symptomologic point of view, having indicated many manifestations in connection with systems or organs and we have purposely avoided pulmonary tuberculosis, so that the question of physical signs as an aid in the diagnosis of the respective conditions has not entered into this consideration. We desire to reiterate our belief in the oft-repeated affirmation concerning the Ghon theory—which, as you know, is based on the respiratory tract as the medium of transmitting into the parenchyma of the lung the primary foci—for we are very apt, in considering diagnosis of such conditions, to lay much stress on physical signs only to find that they are misleading and that bronchiectasis, pneumonia and tumors of the lung very frequently present physical findings that might correspond to those found in tuberculosis. Our object is to inquire why diagnoses are not more frequently made earlier in the progress of the disease. Our belief is that if the symptomatology which predominates cannot be satisfactorily explained, then the laboratory is resorted to, but only too frequently negative opinions result because the microscopist has been unable to demonstrate the tubercle bacillus. This method has been largely responsible for our inability to diagnose early lesions, for we must remember when we consider the pathology that there is a wide gap from the stage of infiltration and the stage of consolidation to that period where caseation occurs and the bacillus has an opportunity to escape and make its appearance so that the laboratory may demonstrate its presence. In other words, the minimal stage has been overlooked and we find ourselves seriously handicapped in the management of the case; much valuable time has elapsed and, instead of an early lesion, we find ourselves face to face with advanced disease.

In our effort to make a plea for earlier diagnosis, we have considered the masked features of this disease so as to be able to present an



argument for the correlation of symptoms, for instance, with x-ray findings. There has been a great deal said and written concerning the aid of the x-rays. The clinician has emphasized his superiority and, perhaps, justifiably, but the objection to artificial means must not be compared for the x-ray will, in very early stages, give evidence of minimal disease, when the microscope will fail to bring results so that the symptoms which have been discussed will, in a considerable number of cases, find a satisfactory explanation in the scientific study of x-ray findings. Thus, we hope, with the aid of the films, that we will have the pleasure of demonstrating our contention and so bring before your mind's eye the importance, the prominence and the place of x-rays in the diagnosis of tuberculosis. Our aim is to diagnose the trouble much earlier than we have hitherto been able to do.

In 20 years of active service, we have seen thousands upon thousands of patients who have come to us ignorant of existence of the disease. We realize that a large number of these people never consulted a medical man, but we realize, likewise, the odium that has been ours, from time to time; sometimes, because we have been too sympathetic to pronounce the diagnosis and sometimes we have called a thorn a rose, and a rose a thorn.

At the outset, we called attention to the attitude of the sociologist toward the medical profession. Tuberculosis is, undoubtedly, a sociologic problem. We have called attention to many phases in the diagnosis of tuberculosis that are, by reason of obscurity, occasionally overlooked, or that because of their masked features have become a rather difficult problem. We have likewise endeavored to prove that the whole subject is not particularly one for the specialist, but rather, because of the multitudinous character of its symptomatology, it has become a medical problem that embraces the entire realm of medicine. It is not he who, perhaps, is able to percuss with accuracy the apical lesion of a pulmonary tuberculosis, that is the tuberculosis specialist; it is rather, the man with broad vision and concept, who recognizes tuberculosis as an affection of the entire system. Such men we find in the realm of medicine and we hope that within the realm

of our honored profession there will be found the salvation of the problem; diligent application, much more thorough investigation, co-operation from schools, colleges and hospitals, will further aid us in bringing down this dreaded foe of human society.

Twenty years ago, the mortality rate in our county was 214; today it is about 75.

To those who have thrown the challenge we say: Koch, the physician, discovered the cause, and, if we are to judge by the signs of the times, if we are to interpret the messages that are coming from the laboratories and the research workers, if we are to give a proper estimate to the work that is now being done by Krause and White, at New Haven, at Denver and elsewhere, and, if we are to consider the efforts of Calmette and the possibilities involved in his proclamation relative to vaccination, which theory has been substantially approved, and, in the animal, at least, confirmed by our own Parks; if we are to take into consideration that the long experience of the research worker has indicated that the point of attack most promising of success is the waxy capsule of the tubercle bacillus and it needs our concentrated efforts to bring forth the anticipated results, and that efforts are now being made in that direction; we may claim, with more or less impunity, that it will be some painstaking, conscientious, honored member of our profession who will join the ranks of those heroes and martyrs who have met and conquered yellow fever, cholera, smallpox and a host of other diseases, who will add tuberculosis to the diseases that will no more decimate the population of the world.

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## FRACTURES OF THE FEMORAL SHAFT.

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Inasmuch as the treatment of fractures of the femoral shaft in adults presents an entirely different problem as compared with the treatment of fractures of the shaft of the femur in children, this group of 24 cases of femoral shaft fractures, 15 in adults and

9 in children, admitted to our service from August, 1923, to November, 1925, will be considered separately.

Previously to the World War the results in the treatment of femoral shaft fractures were exceedingly poor, in fact recovery of the affected limb without shortening was the exception and a good result was recorded if union occurred with good alinement and without more than 1 in. of shortening. Since that time, although the principles of traction and countertraction have remained the same, the introduction of direct or skeletal traction has so improved results that recovery without shortening is now the rule.

For the purpose of classification we have grouped the 15 cases of femoral shaft fractures occurring in adults according to the method of treatment employed: (1) indirect skin traction, 3 cases; (2) direct or skeletal traction, 11 cases; (3) primary reduction and application of plaster cast, 0 cases; (4) open reduction, 2 cases. One case included under skeletal traction came to operation for interposition of soft parts between the fragments.

*Indirect or skin traction.*—This method consists in the application of long strips of adhesive plaster fastened to the thigh as far down as the knee if the latter is kept in flexion, or down to just above the ankle when the knee is kept extended. The leg is suspended in a Pearson or Thomas splint hanging from a balkan frame, the arrangement being an improvement over the old Buck's adhesive extension method. The latter method has, in our experience, shown itself to be of limited use and should be employed only in those cases where over-riding is slight and only sufficient traction is necessary to maintain a proper alinement and position of the fragments until some callus is thrown out, within a few weeks, when a long hip and chest plaster spica can be applied. It is impossible, by means of adhesive plaster traction, to maintain a great degree of traction for any considerable period of time, or traction sufficient to pull down the fragments, without a constant slipping of the plaster and readjustment and injury to the skin. Even with the most careful and detailed arrangement of the plaster,

it has been shown so often that when the necessary amount of weight was added to pull down the fragments the plaster slipped and the deformity remained the same. Often considerable and prolonged disability has resulted from immobilization of the knee when kept in extension by the Buck method. Although this method in the 3 cases mentioned proved satisfactory, it will be noted that there was little over-riding of the fragments and little traction required to correct the deformity.

Inasmuch as this method has been found so unsatisfactory in the past it has now been entirely discarded in favor of skeletal traction, with the exception of the special indications mentioned above. In one of the cases in this group, an extensive comminuted supracondylar gunshot fracture with some over-riding and posterior displacement of the lower fragment, the method of traction as described by Santee, was used; traction in the long axis of the thigh to correct the shortening and traction upward on the lower fragment to correct the posterior displacement, the knee being kept in flexion. The case reported by Santee showed much greater deformity and required skeletal traction, although the same was accomplished in this case by indirect traction. It has repeatedly been shown in fractures of the lower third of the femur simple flexion of the knee with traction in the long axis of the thigh is insufficient to correct the posterior displacement and that traction upward is necessary to bring lower fragment forward.

*Direct or skeletal traction.*—Direct traction on the bone is mechanically sound, and experience shows that full length and alinement can be obtained uniformly. The knee-joint is kept free for active motion. As with adhesive plaster traction, the same method of suspension in a Pearson splint and Balkan frame was used. Full length and alinement were obtained in 7 of the 11 cases and it is of interest to note these were all in young muscular adults where callus is thrown out early. In 2 cases the calipers had to be removed before union was firm enough to hold the fragments in position.



Both were in adults past 50 years of age. The calipers were removed in the first case because of a localized infection about the site of the tongs, which infection immediately cleared up upon removal of the tongs and incision into the soft parts, though the deformity recurred. In the second case the patient insisted on being moved to her home, and although there was no shortening and alinement was good after the application of a long hip spica, the deformity recurred. The end-results in both these cases was no worse than is usually seen with skin traction; there being 1 in. shortening in each case. In a third case, one of supracondylar fracture with comminution, although the shortening was overcome, some posterior displacement of the lower fragment remained, and could not be improved with any change in the degree of flexion of the knee. It is necessary in these cases to apply traction upward on the lower fragment, by means of calipers, as well as traction in the long axis of the leg by means of a Steinman pin through the head of the tibia, as described by Santee. The fourth case came to operation after 2 weeks trial with calipers. In this case the shortening was overcome but alinement was impossible and the sharp edges of the upper fragment could be felt beneath the skin. Open operation showed interposition of muscle.

Certain observations were made from the use of tongs in these cases. Excellent results were obtained in 70% of the cases and from the added experience gained in the earlier cases the results in the later group have been much better. The length of time the tongs were left in place varied from 10 days to 4½ weeks. It was observed that in individuals over 50 years of age, the calipers must be left in for at least 4 weeks, as callus is slowly thrown out, and if removed sooner the deformity is likely to recur. It can safely be said that the calipers should be allowed to remain until callus has become sufficiently strong to hold the position and alinement when a hip spica is applied.

*Infection.*—This occurs surprisingly seldom. It is best to place an occlusive dressing

over the site of the tong holes in the skin and allow it to remain till the tongs are removed. Occasionally (once in this series) a little secretion occurs about the site of the tong holes but this is simply due to mechanical irritation and quickly clears up after removal of the tongs. In older patients there is liable to be more secretion about the site of the tong holes as the tongs are left longer in place; this requires careful attention but not too frequent a change in dressing lest this may incite infection.

*Placement of the tongs.*—The tongs should generally be placed about ½ in. above the adductor tubercle and slightly forward on the outer condyle, parallel with the inner arm of the caliper which is just above the broadest portion of the condyle; this avoids entering the joint or injuring the epiphyseal line. It is best to radiograph the knee after applying the tongs, to see that they are in good position and secured in the bone. We have not attempted the use of calipers in children because the epiphysis is not united with the shaft and if the calipers should slip there would be danger of causing separation of the epiphysis. Moreover, coöperation in children is so slight and the suspension and traction method requires such close observation and inspection at best, that the method seems inadvisable in this class of cases. A Steinman pin inserted through the shaft of the femur just above the epiphyseal line seems preferable in cases of excessive over-riding.

*Open Operation.*—In the 2 cases mentioned in this report, the indications for open operation were, in the first, interposition of muscle between the fragments, and, in the second, a marked displacement of the upper fragment forward and outward in an upper-third fracture. The use of calipers in the first case, failed after 2 weeks trial to improve the position, because of the interposition of muscle. In one case a beef-bone plate was used for internal fixation of the fragments, while in the other we used a medullary peg and a beef-bone plate. In the latter the beef-bone plate was removed one year later, having become loose and a source

of irritation. In both cases excellent position and alinement, with solid union, were obtained.

A serious objection to all open operations, as was shown in one of these cases, is the marked disability and stiffness that occurs in the knee-joint. This is such a common occurrence in these operations that some operators have dispensed with immobilization of the limb following open reduction. This stiffness of the knee-joint is due, first, to the large exposure necessary and the extensive separation of muscles from their attachment to the shaft, and the long period of immobilization with resulting fibrosis. If an open operation is decided upon it should be done early, before any callus is thrown out. This is important because the callus, in these cases with over-riding, is often excessive, holding down the fragments as well as being adherent to the soft tissues, making it difficult to aline the fragments, adding considerably to the amount of trauma, and inducing constant bleeding into the field of operation. With the introduction of skeletal traction, open operations will be reduced to a minimum, being limited practically to compound fractures and to those cases where there is interposition of soft parts.

*Primary reduction and application of plaster cast.*—Inasmuch as primary reduction on a Hawley table with application of a long plaster of Paris hip and chest spica has proven unsuccessful in former cases, the method was not used in any cases in this series; it is only suitable in transverse fractures and in cases where the fragments can be locked. We have used the method more often in children but even in most of these the results were far from satisfactory. By this method it is easy enough to correct the shortening but often impossible to obtain a good approximation and alinement. Reduction of a femoral shaft fracture apparently good on a traction table will not often remain so. It is impossible to hold this traction by a cast and unless the fragments are securely locked the deformity found at the time of fracture tends to recur. A good

result today may be a bad result a week hence.

#### *Treatment of Femoral Shaft Fractures in Children.*

Although there has been a decided improvement in the results of treatment of femoral shaft fractures in adults the treatment in children is still limited to reduction and application of a cast, overhead suspension with countertraction by body weight, as described by Bryant, or Buck's adhesive plaster traction with suspension in a Thomas splint with the leg in flexion. Anatomically, these methods leave much to be desired and seldom does one obtain an end-to-end apposition. These methods nearly correct the excessive over-riding but do bring about in most cases an excellent alinement of the fragments, with an end-result of from  $\frac{1}{2}$  to 1 in. of shortening. Notwithstanding these results the work of Cole, Burdick and David has shown that a compensatory overgrowth of the femur, and often the tibia, occurs in these cases and that after 2 years shortening of 1 in. or less is scarcely noticable or to be detected by actual measurements of the femur. This is of extreme importance in further limiting operative procedures in growing children. Although end-to-end apposition is desirable it is of far greater importance to obtain good alinement. In older children, with excessive over-riding, a Steinman pin inserted above the epiphysis is often desirable.

The 9 cases reported in this series were divided into the following groups: Bryant's method, 4; adhesive plaster traction, 2; reduction and cast, 3; open operation, 2.

Bryant's over head suspension and countertraction by the body weight, was found suitable in only the very young children, 2 of them being under one year. After the age of 4 yr. the method seems undesirable as the body weight is insufficient to correct the shortening. In only 1 of the group was end-to-end apposition obtained, while in the others some degree of over-riding persisted, varying from  $\frac{1}{2}$  to  $\frac{3}{4}$  in., while in the fourth, a boy of 7 yr. with  $1\frac{1}{2}$  in. shortening, an open operation was done.

Of the 2 cases in which suspension traction



in a Thomas splint was employed, this method proved successful in 1 but left a shortening due to over-riding of  $\frac{3}{4}$  in. This case examined and radiographed 1 year later showed by actual measurement of the femurs on the plate a shortening of  $\frac{1}{4}$  in. The boy walked perfectly normally, without a limp and without any tilting of the pelvis or curvature of the spine. This case shows an actual compensatory lengthening of the femur. The second case in this group, after a thorough trial with the suspension and traction method and forcible reduction on the Hawley table, was subjected to an open reduction and beef-bone plating. At no time was one able to obtain a proper alinement of the fragments and at operation interposition of muscle was found.

Of the 3 cases in the group receiving primary reduction and application of cast on Hawley table, 2 were supracondylar fractures; 1 being a separation of the epiphysis with marked displacement. In both of these cases a primary reduction was done under anesthesia and fluoroscope, and a cast applied. In both cases the position and alinement were excellent and the end-results good with no shortening. In the third case the alinement was good but about  $\frac{1}{2}$  in. shortening persisted. This method was employed in several of the cases above reported but in only these 3 did it prove of value. The shortening can easily be corrected on the Hawley table but the alinement often remains poor, especially in upper and lower third fractures, and the shortening is likely to recur within the cast unless the fragments are securely locked.

In both cases of open operation mentioned above an open reduction was done; in one a beef-bone plate was inserted, and removed at the end of 5 weeks, when the position and alinement were good; a slight stiffness of the knee remains at this date. In the second case an inlay Albee graft was used for fixation; alinement and position were good with no disability of the knee. No infection occurred in either case.

### Summary.

(1) Skeletal traction remains the most suitable method of treatment of fractures

of the shaft of the femur in adults and will reduce operative procedures to a minimum.

(2) Indirect or adhesive traction has a limited use in those cases only where little traction is necessary to overcome the shortening and hold the fragments in favorable position till some union occurs.

(3) Primary reduction and application of a cast is unsatisfactory except in a most favorable case.

(4) In children, correction of the alinement is of more importance than correction of the over-riding although the latter is desirable. Compensatory overgrowth takes place and will compensate for 1 in. or less of shortening.

(5) Bryant's method is most suitable for cases under 4 yr. of age, while the Buck's suspension is applicable in cases up to 12 yr.

(6) In cases with excessive over-riding the Steinman pin rather than the calipers can be used.

## GASTRO-INTESTINAL CANCER DIAGNOSIS BY RADIOLOGY.

FRANK DEVLIN, M.D.,

773 Broad St., Newark, N. J.

(Read at the Scientific Meeting of St. James' Hospital Staff during Special Week for the Control of Cancer.)

The use of Roentgen rays in diagnosis of cancer of the gastro-intestinal tract is one of the most important means we have at the present day. The method of Wolff, which is about the latest in the chemical examination, is not to be depended upon as a diagnostic help. In the serum test for cancer, such as the modified Abderhalden reaction, even if positive, there is no hint of the location of the new growth. The possibility of making an early diagnosis of gastric or gastro-intestinal cancer from chemical data alone is hopeless.

With the roentgenogram we have at our disposal a method which has already shown itself to be of distinct value in detecting early carcinoma. The method is not an absolutely positive one, nor can every case be detected in its incipency.

Recognition of early cancer is of distinct value to both patient and surgeon. In this

type of cancer there are some symptoms but they are obscure and with few of gastric character. There is usually no obstruction; the acidity may be practically unchanged; there may be no blood in the stools or gastric contents. These lesions are often quite small and are situated at the pyloric or prepyloric site. They may be primarily cancer, or the result of malignant degeneration of an old ulcer, which is the most common cause. Extension of the growth is from the pyloric and is not annular in character. In this class of cases we may have retention and dilatation, or we may have a wide open pyloric orifice and the meal leaving the viscus very rapidly. We often have the latter condition with chronic inflammation of the appendix, but in this form we lack the small filling defect that is pathognomonic of early cancer.

The screen method in these cases is not to be depended upon. The only exact method is by the direct demonstration of the lesion upon the plate. It is well, before a positive diagnosis is made, to demonstrate the lesion upon the plate taken in a way to rule out any pressure by the liver or gall-bladder. When the defect or growth is annular, radical surgery should be urged. The appearance of advanced carcinoma is merely a more extensive and pronounced picture of the early cancer.

The early and most common symptoms of cancer of the intestinal tract, from my case records, have been obstinate constipation with acute pains, usually general through the abdominal cavity, followed by attacks of diarrhea. If plates are taken by both the ingested meal and enema, and we find a constriction, these are the cases that call for surgical intervention, if we expect to offset the intervention of a more serious problem later; we should not wait until we have severe hemorrhage with the typical filling defect and usually an inoperable condition.

Sir Berkeley Moynihan in his address before the Radiologic Congress in England last year pointed out particularly the value of x-rays in abdominal conditions, where in many cases the diagnosis depends on the x-rays alone. In gastric disease, he pointed out, we owe almost everything to the radiologist. The obscurities surrounding the diagnosis of gas-

tric ulcer have been completely dispelled by radiology. In cancer of the stomach, Sir Berkeley said, the radiologist is now our strength; he is able to make the diagnosis long before we could in the least degree be confident by any other means at our command.

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## PRELIMINARY INSTRUCTIONS TO HOSPITAL INTERNS.

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WILLIAM J. CARRINGTON, M.D.,

Chairman of Intern Committee of the Staff of the Atlantic City Hospital.

Success in the practice of medicine depends upon knowledge made usable by the personality of the practitioner. You have enough medical knowledge already to succeed. During your fifth, or hospital, year you will develop your medical personality. Successful doctors almost without exception testify that their hospital year contributed more to their success than the other 4 years of their training.

*Personality* is the reflection of character and grows and develops as you grow and develop. It is an abstract thing which cannot be seen under the microscope but it can be dissected, analyzed and studied. The following outline is suggested to you as a basis of self analysis. Only by constant self study can your medical personality be developed.

### 1. *Integrity.*

The life and health of patients are now in your hands. During the hospital year establish a reputation for absolute truth. A history prepared inaccurately or one drawn from your imagination may mean an unnecessary operation or even the life of a human being. Some years ago a hurried and harassed intern examined a specimen of urine by the light-sink test. He held it up to the light and poured it in the sink, and reported no sugar. Subsequent operation based upon that falsehood proved fatal.

When you make mistakes own up to them. If you do not make mistakes you will be absolutely unique in the practice of medicine. If you try to cover up, you will succeed only in being ludicrous; but if you own up to your mistakes, like a man, your chiefs will protect you and think all the more of you for it.



## 2. *Sincerity.*

Your knowledge may be extensive but unless your patient is convinced that you are sincere you will fail to inspire confidence. Your fellow interns, the nurses, and the patients soon come to know whether you are sincere, whether you are really trying to make a diagnosis, and to apply every rational remedial agent indicated. Your interest in patients must be personal. In making rounds with a chief do not speak, within earshot of the patients, of that heart case in the corner bed, rather report about Mrs. Doe's heart. In the rush of a busy service you will be tempted to neglect this personal touch. Do not fall into this pernicious impersonal attitude because it will carry on with you in private practice.

## 3. *Loyalty.*

You owe loyalty to the hospital. From now on it is your hospital. Every word of discredit against it is a challenge to you, whether from patients, visitor or physician. It is good psychology to remind the public, when opportunity offers, of the indispensibility and Class A-Plus standing of our institution.

You owe loyalty to your chiefs. Never report the mistakes or failures of one chief to another. The man to whom you carry tales will soon size you up as a tale-bearer not to be trusted. Loyalty brings manifold rewards. The loyal intern is, in times of trouble, secure in the friendship of his chiefs; the loyal intern gets the cream of each service; it pays. While on duty in the wards or in private rooms your demeanor towards the chief should be one of dignified military courtesy.

## 4. *Confidence.*

Your self-confidence will grow in the next 12 months as you become oriented in the practice of medicine. When you make a statement to a patient or one of his family the spoken word carries less weight than your manner of confidence. The best way to gain confidence is to work hard and study each case. Stokes-Adams disease takes on new significance and absorbing interest when seen in vivo in your patient in the ward and studied in your room from your text-books.

Avoid over-confidence. You do not know it all; probably never will. The swell-headed

intern gets far less to do around the hospital than the fellow who shows a capacity for further instruction.

## 5. *Good Nature.*

The cheerful intern makes friends and dispels grief. Humorous plays and books and the comic page are popular because they chase gloom.

The doctor's cheerful "Good Morning" has more therapeutic virtue than half the drugs in the pharmacopeia. Do not confound good humor with buffoonery or intimacy. But dignity, which you must have, may well be mixed with good nature.

## 6. *Friendships.*

Cultivate the friendship of the members of the staff. Select the kind of men among them who bring out your own best qualities and cultivate them. No chief in this hospital wears a high hat.

## 7. *Language.*

Develop an easy flow of technical language in discussing your cases with your fellow interns and chiefs, but, in discussing medical cases with the laity, particularly in courts, use the plainest possible English.

## 8. *Personal Appearance.*

It is unnecessary to point out the importance of a clean shave and a clean shirt each morning.

## 9. *Habits.*

In the profession there are too many unfortunates who have become addicted to the use of narcotics or alcohol. If you are sick or in pain call in a doctor. Never prescribe for yourself. Smoking in the hospital is permitted only in your rooms, in the doctor's office and in the scrub-up room.

## 10. *Broadmindedness.*

Doctors are proverbially narrow minded. Intensive application to their profession makes them so. They are prone to criticize each other. If a doctor starts to criticize a fellow practitioner in your presence it is a wise policy to withdraw as soon as possible without attracting attention. If a doctor refers a case of appendicitis to the hospital and you discover that it is really a case of typhoid fever, remember that he may not have had labora-

tory facilities. Before criticizing him apply the Goden Rule.

Of such elements are your medical personalities composed: Integrity, sincerity, loyalty, confidence, good nature, friendships, language, personal appearance, habits and broad-mindedness.

If you check up on yourselves from time to time you will make a success of the practice of medicine. The younger you are in practice the greater the necessity for frequent self-analysis. The next 12 months will determine your success in after life, because your medical habits are now in the moulding.

There are some other points for you to consider which concern conduct rather than character. The fact that you all are graduates of high class medical schools means that you are ambitious. All of you, I am sure, want to be good interns. Here are some suggestions which may help you realize that ambition:

#### 1. *Relations with the Superintendent.*

Your attitude toward the Superintendent will be friendly and courteous because she is a woman, and respectful because she is the representative of the Board of Governors of the institution. This hospital is not a city hospital, although it receives an annual donation from the city, but is a private institution managed by an elective Board of Governors. The Superintendent understands the relations between the hospital and the public, the police, the coroner, and the accident bureau. If in doubt about your course call on her for help.

#### 2. *Superintendent of Nurses.*

It is a fine and gentlemanly thing to do to rise when either the Superintendent or the Superintendent of Nurses enters a ward where you are engaged. It costs little but it engenders a fine spirit. It is a deference to which the position of each entitles her.

#### 3. *Chief Resident.*

When in doubt ask the Chief Resident. It is his duty to examine all cases upon admission and refer them to the proper department. He will arrange your time off and your relief. In your work lean heavily on him, for he is sympathetic and has just travelled the road which to you is new.

#### 4. *Intern Committee.*

The intern committee of the staff is always ready to help you in any way possible.

#### 5. *Staff.*

In public ward work you are the physician or surgeon in charge.

The responsibility is all yours. Every day there will be a more experienced man around for consultation, but you are the doctor. The chief will do his best to make his daily rounds at a certain fixed time and will expect you to make rounds with him. The telephone operator will call you as soon as the chief comes into the house. Meet him promptly. Report threatening or dangerous symptoms to the attending surgeon or physician promptly. If in doubt, err in the side of over-caution, and notify him.

The staff of the hospital holds regular monthly meetings, each one of which you are expected to attend, unless you are on duty. You are obliged to report at least one case in full to the staff during the year. This will prove valuable training for medical society work later in life. In addition you are expected to prepare a paper for some medical journal, either reporting a case or series of cases. This too is for your development.

#### 7. *Relations with Nurses.*

Never neglect an opportunity for instructing or demonstrating interesting phenomena to nurses. If the nurse has made a mistake, tell her about it in private and not in the presence of other nurses or patients. Well deserved commendation gives a nurse more confidence in you than a clever diagnosis. Nurses may not know as much medicine as you do, but they know more about a particular case than you do. Coöperate with them. A friendly nurse can help and an unfriendly nurse can hinder you more than you now realize. The rules of the hospital forbid all social relationships between interns and nurses.

#### 8. *Anesthesia.*

May I admonish you to be prompt when you are to administer an anesthetic and to watch the patient rather than the operation.

#### 9. *Operations.*

It is impossible to tell you how to become good assistants. After 18 years of observa-



tion I have noticed that the interns who were faithful in little things get the big things to do. It would seem unnecessary to urge you to scrub for each operation as though your own sister were on the table. If the operator swears at you and cracks your knuckles, remember that he is under a heavy strain and that it is not a personal matter. You will understand this better when you are operating surgeons yourselves.

#### 10. *Histories.*

By their histories shall ye know them! Well written histories promptly prepared, are the unfailing mark of a good intern. Postponed, slovenly, careless histories, by the same token, are the mark of a loafer. Your histories are the most important part of your work in the hospital; and in private practice for that matter. It will probably take you 8 months to realize this but it is true. When the supervising nurse on a floor calls you for a hurry-up history do not take it as a personal affront. It is her duty. No anesthetic can be administered without a physical examination and no patient can be discharged without a history no matter how short the patient's stay in the institution. Accident ward records are highly important in industrial and compensation cases and in cases involving litigation.

#### 11. *Ambulance.*

Answer ambulance calls promptly. If the patient is dead in a private home call the coroner. If death has occurred in a public place or on the street, bring the case into the hospital because there is no morgue in Atlantic City. When on the ambulance, if there is a patient, ride inside with the patient rather than with the driver. Have the colored orderly ride out front with the driver. In going to fire calls have an oxygen tank ready and in answering poison calls have the stomach tube in working order. Indeed, go over your ambulance kit as soon as you go on that service. If a patient ought to come to the hospital but refuses, have him sign a slip of paper releasing you and the hospital from responsibility.

#### 12. *Dispensary.*

This service is one of the most important of the year, both from your standpoint and from the standpoint of the hospital. The reputation

of the institution is absolutely in your hands while you are on that service. You will treat 10 times as many cases as the chiefs in the house. In other words, the public will have 10 times as many contacts with the hospital through the intern as through the staff. It, therefore, behooves you to use tact and diplomacy. Dispensary patients will often be unjust and unreasonable, because they are ignorant and poor; ignore their insults. Nowhere else will you need so much tolerance and forbearance.

Do not do major surgery in the dispensary. For example, the clinic is not the place to suture muscles and tendons. In lacerations of the face use horse hair sutures. In all punctured wounds of the palm and sole and in all gunshot wound cases use antitetanic serum. The clerk and nurse in charge of the dispensary have been instructed by the Superintendent to report accident cases to the prosecutor's office or the accident bureau. This is a matter of hospital routine which need not concern you. It is of the greatest importance, however, for you to have adequate accident records for all compensation cases and for cases which are likely to come to trial. If there is the slightest question of fracture do not allow the patient to go away without an x-ray examination. When the dispensary is crowded with patients, remove those with shock or with serious injuries, to the ward, or you will soon have Bedlam let loose.

#### 13. *Obstetrics.*

Do not deliver abnormal cases without consultation with the chief. This, of course, includes forceps and breech extractions.

#### 14. *Pine Rest.*

Your service at Pine Rest starts at 9 o'clock each morning. You are expected to attend the monthly staff meeting of that institution.

#### 15. *Postmortems.*

Another criterion of a good intern is the number of postmortems he secures; a high percentage means an interested intern. If you can convince the relatives of the deceased that a thorough but not a mutilating examination ought to be made for their personal benefit there is less difficulty in obtaining posts than if you ask for an autopsy as a favor to you

or the hospital. Explain how much everyone is interested and how for this reason you can arrange it without cost. And never quit trying!

#### 16. *Pediatrics.*

When taking the history of an infant be sure to get a thorough feeding history from birth. All infants and children should receive Mantonx tests. The intern on pediatric service should attend the Child Welfare Clinic on Thursday afternoons at 3:30 in City Hall annex.

#### 17. *Time Off*

The better interns take little time off. The profession is too engrossing; the time to gain experience too short. Before leaving the hospital arrange with the Chief Resident for relief and sign out in a book provided for that

purpose. If you think you are over-worked you are a round peg in a square hole, because in private practice you will work harder than ever an intern worked.

#### 18. *Meals.*

Let me urge you to be regular and prompt at meals both for the sake of your stomach and for the routine of the dining room.

In closing let me remind you that these are not a lot of rules, but are suggestions meant to be helpful. It is the earnest desire of every member of the staff to be of real genuine help to you men. It is the worthy ambition of the members of the staff of the Atlantic City Hospital to graduate each one of you a year hence, successful practitioners of the high and holy art of healing, adept in the art of meeting, treating, influencing and directing patients.

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## SOMEWHERE LAND.

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Tell me not of the dreary Poles  
In the trackless regions that lead men's souls  
Through desolate seas to shadowy goals;

My heart recoils from these fields of ice,  
Whose clasp is death. In their frigid vice  
Perish the bold whom their lures entice.

Nor bid me away to the sun-parched South,  
Where all is torpor, and heat and drouth,  
And the great boa lurks by the river's mouth;

Where lost men die in the jungles dark,  
And the blue seas swarm with the fearsome shark,  
To none of these realms would I embark.

Then where shall my restless soul find rest,  
My heart with its cares and its fears oppressed?  
Perhaps if I seek in the sunset West,

In the gloaming land, where the mountains throw  
Their purple shades o'er the untrod snow,  
I'll find the land that I long for so!

Yet there might my soul, from its load released,  
Faring forth in the morn find its cares increased,  
And longingly look toward the rose-hued East,

Toward the morning land, where the long night  
breaks,  
And the golden light of the dawning makes  
Another day as the world awakes.

And my soul might sigh for it over There,  
And my heart be sad in my West so rare,  
With its towering height and its crystal air.

Yea, a restless longing would haunt my mind,  
Still seeking that Somewhere undefined  
Wherever my wandering path might wind.

So I'll bide at home, where my soul may cheer  
Away by labor, each care and fear;  
Then lo, shall my Somewhere Land be Here!

R. S. Cone.



# JOURNAL OF THE MEDICAL SOCIETY OF NEW JERSEY

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Each member of the State Society is entitled to receive a copy of the JOURNAL every month. Any member failing to receive the paper will confer a favor by notifying the Chairman of the Publication Committee of the fact.

NOTE.—The transaction of business will be expedited, and prompt attention secured if,—

All papers, news items, reports for publication and any matters of medical or scientific interest, are sent direct to THE EDITOR, Atlantic City, N. J.

All communications relating to reprints, subscriptions, extra copies of the JOURNAL, books for review, advertisements, or any matter pertaining to the business management of the JOURNAL are sent direct to THE CHAIRMAN OF THE PUBLICATION COMMITTEE, (address above), Newark, N. J.

## GROUP INSURANCE.

The Chairman of the special committee on Group Life Insurance, Dr. Pinneo, and the Recording and Executive Secretaries, have, during July, presented to 3 county societies the insurance plan discussed at the Annual Convention in June, and with interesting results. At the Monmouth County meeting, which was in reality a "picnic" and not a regular business session, the members showed marked interest and asked a number of pertinent questions; no formal action was taken, as this informal presentation by Dr. Morrison took place in an interval between the serial pleasures of a "clam bake" on the riverside. The Cumberland County Society promptly endorsed the plan and authorized its member of the special committee to proceed with efforts to enroll the members. At the Union County meeting, after endorsement of the plan, the committeeman asked those who were really, seriously interested in the project to show their hands, and almost all those present indicated a desire to take this insurance.

If these experiences may be taken as an indication of what may be expected over the state, it would appear likely that the necessary 75% of membership subscriptions will be readily obtained.

Every member of the Society has already received 2 preliminary explanations of the proposed group insurance plans; the first appeared in the July Journal, page 356, and the second

was in the form of a reprint sent by the committee. In addition to these notices, each member will be called upon by his county representative on the Insurance Committee and given an opportunity to ask questions. Be prepared to consider the subject seriously and promptly. Your immediate decision will help to promote or dispose of the plans. Your delay will handicap the committee and, perhaps, jeopardize the success of these plans to benefit all the members of the Society.

## AUTOMOBILE INSIGNIA.

Did you read, in the July Journal, our note concerning Commissioner Dill's request?

The Commissioner of Motor Vehicles has offered to place a distinguishing mark upon the automobiles of physicians and to instruct his men to extend special privileges to physicians—under proper conditions, of course—provided previously issued state insignia be surrendered and all other special insignia be abandoned. This is a courteous effort to recognize the exigencies of our professional work and to extend favors on the road when doing so will aid in relieving suffering humanity. Extension of such courtesies would be greatly facilitated by adoption of one characteristic insignia; a multitude of different devices only serves to confuse the officers of traffic control. It would seem wise to accept the Commissioner's offer and to show apprecia-

tion thereof by promptly applying for the new marker. We are told that up to the moment a very small percentage of our members have responded to the request, and there is reason to fear that it will be withdrawn, and all similar privileges abolished, unless a much larger number of physicians show an active interest in the problem in the near future.

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### ARE YOU UNKNOWNLY TAKING MEDICATED FOOD?

If self-preservation is the first law of nature, and community health preservation the first law of our professional conduct, we have confronting us a doubly important demand upon our attention—in the possible necessity for action to prevent the indiscriminate use of *iodized table salt*.

In "Observations from the Lighthouse" we have this month discussed a situation that threatens to become serious. It has probably not yet reached alarming proportions in this region, but there is unquestionably need for immediate action to safeguard our own personal health and the welfare of the general public. If the grocer can force us to take iodine with our salt, regardless of our needs or wishes, what may he not administer to us next?

Scientific investigation seems to have proved that a small amount of iodine in the food or drink is harmless to young children and may even be beneficial for the vast majority of them, but, on the other hand, that it is far from harmless for adults and may be really dangerous to girls passing through adolescence. Certain it is that neither iodine nor any other drug should be fed to the people without medical authorization. Yet, it would not be surprising to find that you are yourself taking iodized salt at the dictation of your groceryman.

We would respectfully suggest that you inquire into your home supplies; that, if this condition exists, you shall individually advise your grocer to sell the medicated salt only to those who request it—not to supply it indiscriminately upon all orders for "salt"; that you discuss the matter at the next meeting of your county society, so that concerted action

may be taken in the interest of public health; and, that you aid the Health Department in any action taken to correct the public misunderstanding of the iodine-goiter prevention problem.

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### VACATION TIME.

There are few workers in greater need of prolonged annual vacations than are physicians, and probably few who are more deserving. The wear and tear of active practice is heavy. The conscientious physician or surgeon, not only meets the physical strain of the day's work but has to carry the double mental burden of dealing with the scientific problems presented and of bearing the responsibility for his decisions and acts. In consequence even those who have only a comparatively small number of patients endure a constant nervous strain, need frequent short periods of rest, and should take a more prolonged recreation period at least once each year.

For most of us the summer months are the available ones for this purpose and it behooves all who can to take advantage of the opportunity. Now is the time to consider it, if your plans have not already been made. Go away from home; change, as complete in character as possible, is one of the main factors in rest. Travel, especially into strange territory, is beneficial in many ways; it is restful, stimulative, recreative and educational. An ocean voyage and European scenery, not to mention the possibilities of new ideas to be gained from casual visits to foreign clinics, appeal strongly to many. But, these great United States offer a thousand attractive trips—the National Parks, the desert or mountain or lake regions, the vast expanse of seashore—and many of the most delightful resorts are within a few hours ride of any New Jersey physician.

Do not delude yourself with the argument that you cannot afford it this year. The fact is that you probably cannot afford not to take some kind of a vacation trip. The most expensive ones are not necessarily the most valuable. Roughing it, getting "back to Nature"—can be accomplished inexpensively and will do you "a world of good".



## ATTENDANCE AT ANNUAL MEETING.

We are wondering whether we have any right to feel proud of the attendance record of the recent state convention, or if we should really feel somewhat ashamed of its poor showing. The report posted at the final session, to the effect that total registration reached 827 looked rather good, but when opportunity to analyze those figures was afforded, the satisfied feeling dwindled to almost the vanishing point; for it was then disclosed that there were only 355 members present, and that with the exception of 12 visiting physicians from other states and countries, the total was made up mainly of registered "guests" and exhibitors.

Our total membership, according to figures presented at the convention by the Recording Secretary, was 2267 at the time; the figures used in the accompanying chart (2113) being of date of February first. That only 355 of these appeared at the meeting shows an attendance of but 15%. How this would compare with the records of other state medical societies, we do not know; the only figures at hand at this moment are those of the last New York state meeting and we suffer no shame from that comparison because our neighbor mustered an attendance of but 11.3%. The impression is with us that some other states make a better showing but it would probably be futile to compare the figures, even were they at our command, since so many and so varied elements enter into the comparison.

It is reasonable, however, to feel that we might and should do better, and that we ought to consider the reasons for such small attendance and the possible ways of improving the record at future meetings. Through the courtesy of the Corresponding Secretary, Dr. Carrington, who supplied us with the map and statistical figures, we are able to present a graphic picture of the membership and attendance by counties. Even a cursory inspection of this picture will permit of some interesting deductions. If we omit Atlantic County, because most of her members live in or very close to Atlantic City, the meeting place, and she consequently made a showing of 50%, the total attendance was only 292, or 14% of the

membership of the other 20 counties. Of the larger counties, Union made the best record, 23%; while Essex, Hudson and Mercer approached the general average, with a 13% record for each. Distant Warren county did not do so badly, comparatively speaking, with 10%, but why did Bergen and Middlesex show but 9% and Monmouth but 8%? The counties within easiest reach of the meeting place made comparatively good percentage records—Cape May 30%, Cumberland 20%, Gloucester 25%, and Camden 22%—but it does seem that a still better showing might reasonably have been expected of them. Cumberland with 40 members had but 8 of them in attendance; Cape May with 20 members contributed 6; Gloucester sent 7 out of 27; and Camden with more than 100 members, had but 23 present, though travel facilities from all parts of that county to Atlantic City are excellent.

What is the explanation of this general lack of interest? The place of meeting was convenient and accommodations were available at any price to suit one's taste. Meeting at a seaside resort would seem to have an appeal because it permits of a coincident vacation, to some extent. The scientific program was a good one; at least it appeared so to us, and we heard no serious criticism of it. The business matters to be discussed by the delegates were surely of considerable import to every member and every member should have sufficient active interest in his own professional welfare to make him anxious to participate in these annual conferences where matters affecting his success are to be decided. It may be said, with reference to society legislation, that every member was represented by a delegate; that is true, but the wiser man knows that the individual who looks closely after his own interests fares best.

How can we ascertain what, if anything, is wrong, and, how can we devise a plan for improvement? We feel certain the State Society Officers, and especially the committees charged with the responsibility of preparing programs and general arrangements would like to have answers to these questions. We suggest that those of you who did attend shall

submit suggestions for bettering conditions, and that those members who remained at home shall write us explanations of their absence and present suggestions for changes that would induce them to come out. Honest, not

carping, criticism will have a healthy effect, and all suggestions will receive the merited consideration. A few open letters for our correspondence column may be productive of good results.

Counties	Total Mem- bership	Permanent Delegates present at the 160th Annual Convention	Annual Delegates present at the 160th Annual Convention	Members present at the 160th Annual Convention	Guests present at the 160th Annual Convention
Atlantic .....	118	9	3	51	108
Bergen .....	109	4	3	5	8
Burlington .....	39	4	2	1	12
Camden .....	101	11	2	10	23
Cape May .....	20	2	1	3	7
Cumberland .....	40	4	1	3	10
Essex .....	532	36	21	19	71
Gloucester .....	27	4	1	2	7
Hudson .....	338	27	12	2	34
Hunterdon .....	25	1	1	—	2
Mercer .....	130	11	5	1	14
Middlesex .....	78	4	3	1	2
Monmouth .....	66	2	2	1	5
Morris .....	62	2	3	4	7
Ocean .....	15	2	1	1	13
Passaic .....	175	13	3	4	18
Salem .....	18	2	1	2	5
Somerset .....	35	3	1	1	4
Sussex .....	17	—	1	2	11
Union .....	136	15	6	10	15
Warren .....	32	3	—	—	3
	2113	159	73	123	379

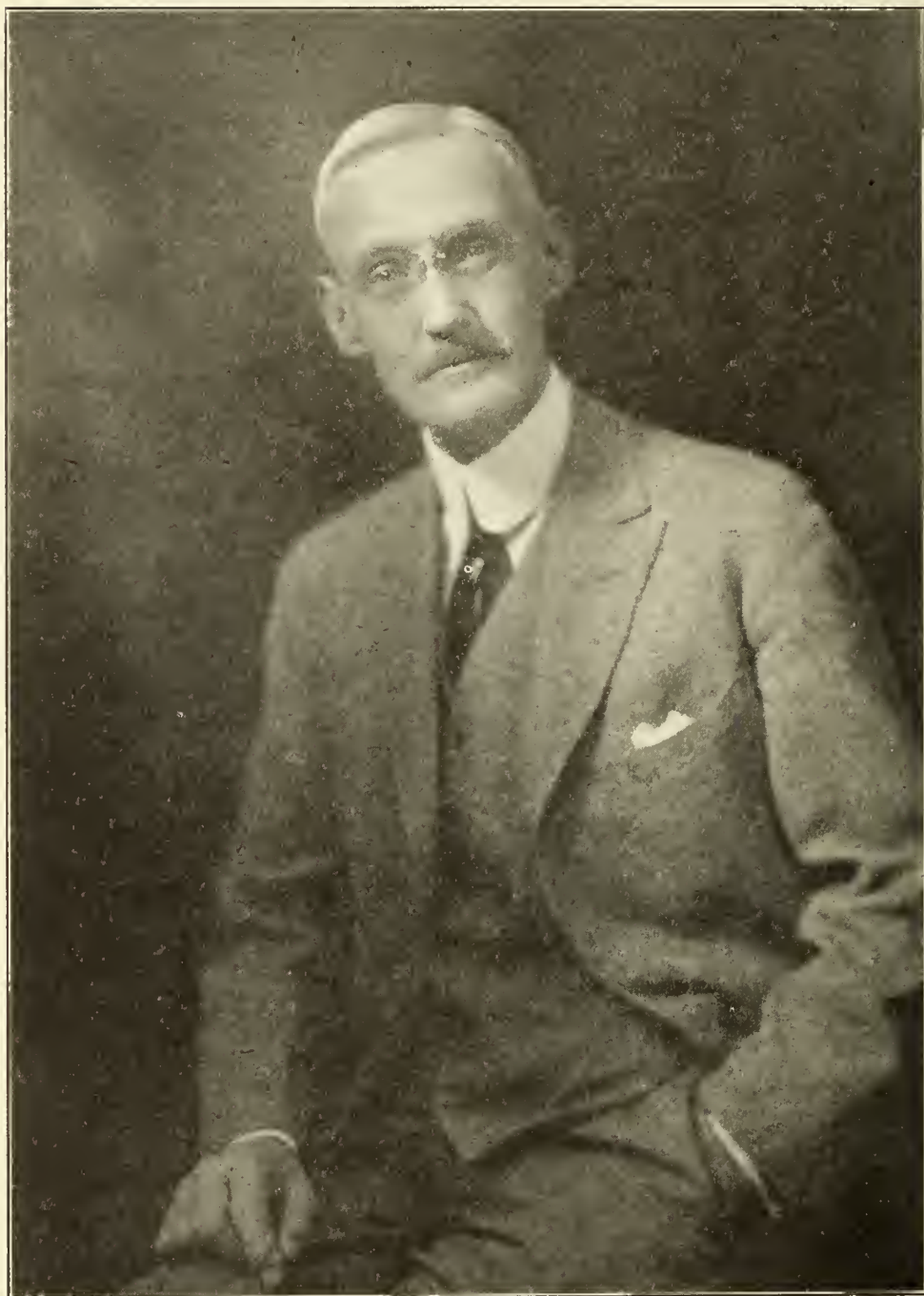
Total Registration 160th Annual Convention (1926).....	827
Total number of Doctors.....	367
Exhibitors .....	62
Guests from outside New Jersey .....	19
Doctors from outside New Jersey .....	12

New York City .....	4
Los Angeles, Cal. ....	2
Philadelphia, Pa. ....	1
Joplin, Mo. ....	1
Baltimore, Md. ....	1
Shanghai, China .....	1
Nauroppin, Germany .....	1
Czecho-Slovakia .....	1





## In Memoriam



JAMES MINOR MAGHEE, M. D.,  
AUGUST 23, 1865—JUNE 22, 1926



MAGHEE, James Minor.—A career rounded out in years, attainments and conspicuous public service was closed when in the early morning of June 22, 1926, the spirit of Dr. James Minor Maghee, of West Orange, drifted quietly and tranquilly into the shadowy river that flows forever to the unknown sea. As it is, his life seems all too short to those who have been privileged to know the remarkable charm of his personality, the joy of his cheerful comradeship and his genuine worth.

Dr. Maghee was born in Evansville, Indiana, on August 23, 1865, of Gillison and Jacqueline Minor Maghee. When he was 3 years old the family moved to East Orange. His early education was obtained in the Dearborn Morgan School and in the East Orange Public Schools. He entered Yale and was graduated with the Class of '84 and from the College of Physicians and Surgeons, New York, in the Class of '87. He was a member of the Chi Phi Fraternity, of the Orange Chapter No. 23 Royal Arch Masons and of the Royal Arcanum.

Dr. Maghee was married June 3, 1891, to Emma Louise Ricker of Boston, Massachusetts, by whom, and a sister, Mrs. Emma Snow of West Orange, he is survived.

Dr. Maghee began the study of Medicine under the preceptorship of the late beloved Dr. William Pierson of Orange, the Nestor of New Jersey Medicine. After his graduation, he served as intern for 18 months in Charity Hospital, New York, studied a year abroad and then settled in West Orange, where he practiced his chosen profession up to the time of his death.

Dr. Maghee was a member of the Orange Memorial Hospital staff for 35 years, a Director in the West Orange Bank, a member of the Advisory Board of the West Orange Community League, of the William Pierson Medical Association, the Orange Mountain Medical Society, a Member, Trustee and Permanent Delegate of the New Jersey State Medical Society, a member of the Essex County Medical Society, and for 23 years a devoted member of the Essex County Medical Milk Commission. Dr. Maghee was for 20 years Medical Inspector of the West Orange Schools and for 7 years was Health Officer of West Orange.

When a man like James Minor Maghee goes on ahead of us from this earthly school, we know that something real has gone and that something of abiding weight and worth, has left us. The true gold we get in life is the love of such men. It is a priceless heritage to have been counted among his friends. His activities covered about all the channels in the life of a valuable man. He was conspicuous in the cause of education and in the work of his chosen profession, unselfishly gave his efforts to numerous charities and institutions to relieve human suffering and more particularly steadfastly devoted himself to the progress, development and furtherance of the Essex County Medical Milk Commission, which he loved so well.

He couldn't help having a host of friends. He ennobled his calling. He has ever stood for the best things in life and he fought for them fearlessly

and tirelessly. No good cause ever lacked his support and he gave unsparingly of his time, of his substance and of his great gifts to promote and enhance every public good.

His career was distinguished in many ways but there was that about Dr. Maghee himself that was more distinguished than anything that he ever did.

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PATTON, Gordie C., of 588 Benson Street, Camden, New Jersey, died suddenly at his home, June 28, 1926. During the afternoon of that day he had complained of feeling badly and went to bed believing that he was suffering an acute gastro-intestinal upset which would soon pass over. About 10 p. m., some friends calling to inquire about his condition found him dead. Dr. Patton was only 39 years old, was more than 6 feet in height and proportionately developed. During his service with the A. E. F., while at Coblenz, he contracted an obstinate eczema of the hands that required x-ray treatment and while this controlled the initial condition it caused a severe keratosis of both hands. This limited and interfered with his professional work to a marked degree but, though painful and disfiguring, he was never heard to complain of it.

Dr. Patton was born in West Virginia, received his medical degree from Jefferson Medical College in 1915, served an internship at the Philadelphia Polyclinic, and commenced his active practice as Surgeon for the Dupont Company at Kearny, New Jersey. When the United States entered the World War he volunteered for service and was soon sent over-seas. He reorganized the Medical Detachment of the 114th Infantry, N. J. N. G., and became Commanding Officer with the rank of Major. He remained with the Army of Occupation until the summer of 1919, and when he returned home and established himself in practice at Camden.

Dr. Patton was appointed to the Cooper Hospital Staff in 1921 as Out-Patient Physician, and later became Physician to the Home for Friendless Children, and to the Veteran's Bureau. He was a member of the Camden City and Camden County Medical Societies, and of the Association of Military Surgeons.

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WITT, George B., of 99 Shanley Avenue, Newark, died July 10, 1926, at St. James Hospital, of which institution he was Chief of Staff of the Clinical Department. The cause of death was intestinal obstruction.

Dr. Witt was 42 years old and had practiced medicine in Newark for 15 years, since his graduation from New York University and Bellevue Hospital, devoting himself especially to diseases of the stomach.



## Esthetics

### THE FRUIT OF THE FAMILY TREE.

ALBERT EDWARD WIGGAM.

(A Synopsis.)

(For the man who said, "It's all right to have a family tree provided it's not too shady", this book was doubtless primarily written. It conveys, in vivid everyday talk, him to the astounding scientific fact that, whether he wills it or no, every man has a family tree whose quality he daily exhibits to the world in face, form and behavior. No tendency, no thought, no act is so insignificant that it does not reveal his heredity.

Professor Franklin Giddings, of Columbia, regards this volume as "the most important contribution to popular education that has been made in America in 50 years".

Every physician should read it from cover to cover, not only for its treasure of information, which will be an asset to him professionally, but for the wealth of illustrative reference and anecdote which will be a keen pleasure to him personally.

This synopsis follows the author verbatim for the most part. Of necessity, however, it lacks the almost raconteur style which lifts a near scientific treatise from the dead level of a laboratory log to the enthusiasm of a gospel.—*Editor's note.*)

Unless a man understands heredity he can not possibly understand human life. Without a knowledge of heredity there are very few problems of life which one can approach intelligently because he is in total ignorance of one of the largest forces that enters every moment into human character and social destiny. It would seem, therefore, one of the highest duties of the citizen to learn what scientists have discovered about this force—what it is, how it operates, what it does to a man, to his family, to his race and to his nation. To explain heredity is the first object of this book; the second is to indicate what heredity means to all mankind.

Nearly every one believes that "blood will tell" in plants and animals, but when it comes to the human family many people expect good children to be born from bad parents, and healthy offspring from weak ancestry. The well known history of the Kallikak family demonstrates dramatically how even splendid heredity can be swamped by mismating, and how the union of two streams of great blood of similar character begets great blood. From the union of Martin Kallikak, a soldier in the

Revolutionary War, with a feeble-minded girl were born, in the course of 6 generations, 480 descendants, who have cost society hundreds of thousands of dollars in the restraint of their evil tendencies and the care of their feeble minds and bodies. Martin's later marriage with a healthy Quaker woman has given to the world 496 descendants of highest respectability and social usefulness.

It must not be inferred that all the greatness displayed for generations in certain families was due to the direct influence of the original heredity. The direct influence of any one distinguished ancestor is soon lost, owing to the fact that as the germ-cells divide, the great qualities get scattered; also new marriages bring other factors into the line of descent. Genius is due to the fortunate concentration in one germ-cell of a large number of the great human qualities. Another element which maintains the high level of a family strain is known as "assortative mating", the tendency of like to marry like. In degenerate breeds where like marries like, the human cess-pool is constantly widened.

### What Heredity Tells and How It Tells It.

On the evening of February 8, 1865, the great drama of man's discovery of the laws that govern his own heredity began. A young man, Gregor Mendel, a Catholic monk and a teacher in Brunn, Austria, read a paper before a company of his neighbors which related the results of his experiments with common garden peas. The audience probably dozed through most of it, unaware that they were listening to the first announcement of one of the greatest discoveries in the history of mankind. What a pity Charles Darwin was not there!

Mendel died in 1884, unknown outside his little city. Yet in November, 1922, scientific men gathered from all over the world in the little garden where the peas were grown, in order to dedicate a tablet to his memory. Mendel's little paper has now grown into several thousand volumes, and reports of special investigations, and Professor William Bateson, of England, says that the knowledge which has grown out of Mendel's experiments will probably have more to do with man's destiny on this earth than any other scientific knowledge which we can now foresee.

Three definite facts in regard to heredity have been confirmed by millions of experiments. First, that many, possibly all, characters in plants and animals (color of flowers, flavor of fruits, speed of animals, insanity or genius) are due to genes (determiners) in the germ-cells from which plants and animals are born. Second, that the determiners for the

characters exist throughout the plant and animal world in pairs (tallness being paired with dwarfness, straight hair with curly, etc.), and it is believed that no two members of any pair of contrasting factors ever go into the same mature germ-cell. Third, that these determiners assort freely on the laws of chance, and that, as a result, the characteristics of the parents will reappear in fairly predictable groups of combinations in the offspring.

Mendel suggested that in crosses, where one parent bore one character and the other parent bore its contrasting character, both characters might be present in the body-cells of the offspring, one showing more plainly than the other. The character which showed the more plainly he called the dominant quality, and the one which disappeared altogether or partly, the recessive quality. The suggestion that made his name immortal, however, was that when these hybrids came to form their reproductive cells (pollen grains and ovules) the dominant quality went into only one-half of the germ-cells while the recessive quality went into the other half.

Thomas Hunt Morgan and his colleagues, writing on the Mechanism of Mendelian Heredity, say:

"Its fundamental principle is very simple. The units contributed by two parents separate in the offspring without having had any influence on each other. For example, in a cross between yellow-seeded and green-seeded peas, one parent contributes to the offspring a unit for yellow and the other parent contributes a unit for green. These units separate in the ripening of the germ-cells of the offspring so that half of the germ-cells are yellow-bearing and half are green-bearing. This separation occurs both in the eggs and in the sperm.....

"The sperm of every species of animal or plant carries a definite number of bodies called chromosomes. The egg carries the same number. Consequently, when the sperm unites with the egg, the fertilized egg will contain the double number of chromosomes. For each chromosome contributed by the sperm there is a corresponding chromosome contributed by the egg, that is, there are two chromosomes of each kind, which together constitute a pair."

Chromosomes (it is explained for the uninitiated) are small bodies inside every cell of every living plant, so called because they take a stain while the balance of the cell remains clear. Professor Morgan has proved that these chromosomes are "the sole bearers of heredity". In them are stored the determiners. The chromosomes in the body-cells determine one's life characteristics (height, weight, form, temperament, etc.), while those in the reproductive cells carry these characteristics on in the line of heredity. Chromosomes are, therefore, as Woods has said, "the most important things for their size in the whole

world." Every cell in the human body contains 48 chromosomes, exactly half having come from the mother and the remaining 24 from the father. The way these chromosomes behave in the cells, the marvelous and still mysterious way in which they move with all the precision of planets, the way they divide and grow and sort themselves out in Mendelian proportions and thus distribute the various characteristics of the ancestry among the descendants—all this is to the mind of the author of this book the most inspiring and exciting series of events which it has ever been the privilege of the human mind to contemplate.

One important point to which Wiggam repeatedly calls attention is that the body cells and germ-cells are two separate systems of organization.

"When two cells unite from two parents to form a new being they divide and grow to produce the new living individual. But in the higher plants and animals a few cells are set aside at the beginning of each individual's life. These are the reproductive or sex cells. They remain unchanged, set aside in special organs, until the individual comes to maturity when they begin to multiply and are by sex-union combined with a cell from some other individual and thus a new generation of individuals comes upon the scene. The plant or animal merely carries these germ-cells through life and adds nothing to them in so far as we know—except nourishment—and takes nothing away. It is evident then that heredity, the portion set aside for reproducing the next generation, is one continuous stream."

Now as to the methods by which these wonderful and immortal cells divide and grow into the bodies of living things, and how they hand on their qualities to their children. When the egg and sperm are about to unite a most remarkable series of events takes place. Inasmuch as every cell (body-cell and germ-cell) has a certain number of chromosomes which carry the heredity determiners, it is obvious that if two cells should unite there would be twice too many chromosomes. At this point, then, both the egg and sperm go very rapidly through what is called reduction division, by which in each one of them one-half of the chromosomes are thrown out. In this process the chromosomes collect at the equator in the usual manner, but, instead of splitting in halves as usual, they separate into two camps, half of them floating to one end of the cell and half to the other. The cell membrane then contracts between the two camps and, as a result, we have two cells, each containing only half the usual number of chromosomes. It is just at this point, no doubt, that the segregation of the Mendelian factors take place, as it is a mere matter of chance which end of the cell it shall be toward which any particular chromosome shall migrate. One readily sees that in



the chromosomes which are left out many of the hereditary characters of the ancestors are lost to the particular individual who is to be born from any particular cell.

When it comes to the application of the Mendelian laws of heredity in any clear cut way to the large and significant traits of human beings, one is confronted by serious difficulty due to at least two major facts: (1) dominance and recessiveness are not often complete; (2) many characters are due not to just one factor and its opposite or possibly its absence in the contrasting chromosome, but are caused by two or more factors. Furthermore, these determiners influence each other in the development of the individual; and still another difficulty lies in the fact that the factors for a few characters are linked with the sex determiner. This means that the character is transmitted by one sex but shows only in the opposite sex.

"It will surprise many people, no doubt, to learn that the cause of sex has long been well known to biologists. At least the factor in the germ-cell which gives the initial impulse for the individual to become either male or female can readily be seen through the microscope. The chromosomes, as I have said, are in pairs; but in the cells of many plants and animals can be seen an extra unpaired chromosome. In some species, instead of an extra chromosome, there is a peculiar enlargement or a difference in the shape of one of the chromosomes. This extra body or peculiarity of size or shape is the sex determiner.

"In most species of plants and animals all the female cells possess this extra body, while only half the male cells possess it. During fertilization, when the male and female cells unite to form a new individual, if the male cell happens to be one with the sex chromosome the fused cell is provided with two sex determiners. The plant or animal growing from this union will be a female. If a male cell without a sex determiner enters the union at fertilization, the fused cell is provided with but one sex chromosome. The plant or animal from this union will be a male.

"In birds and some other species these facts are reversed. But the above is the usual rule of nature. Since half the male cells have the sex chromosome and half are without it, it is bound to result in the long run that about half the offspring will be males and about half, females."

The high injunction of Mendelism to eugenics is that good factors can be concentrated in families and by wise marriages preserved there and handed down to bless the race. The bad factors have a tendency, by assortative mating, also to become concentrated in family lines. Where these become positively antisocial the individuals possessing them can be either confined or sterilized, and their strains of pollution weeded out of the race.

(To be continued)

## Communications.

### The Group Life and Group Accident and Health Insurance.

(Letter from Dr. Pinneo, Chairman of the Committee).

Last month the Journal published a full statement of the new Insurance offered to members of the State Society on a plan adopted by the House of Delegates, June 18 last. A letter has since been sent to every member, enclosing a reprint of that statement to be kept for future ready reference, and affording him (or her) opportunity to accept Life Insurance (\$5000) with the Prudential and Accident and Health Insurance (\$5000) with the Commercial Casualty Insurance Company. The provisions in the policies are extraordinarily liberal and the premiums very low. This is partly due to negotiation in preparing these policies and to the group system of insurance but will be much aided by increasing the numbers in the group; 75% of members must apply to procure either policy. It behooves every member to himself apply, and, also, to help secure at least one other applicant.

Insurance is the very quickest method known for creating an equal asset for dependents (if not for one's self) in event of death or disability. The importance of this to doctors is self-evident.

The officers of each County Society, with the member of this Committee in that county, are urged to stir up the interest of the members and get **immediate consideration** of the matter that the Committee may soon know whether the contracts can be concluded. The Committee, with the member in each county, as appointed by the President, Dr. Green, is constituted as follows:

Atlantic—D. W. Scanlan, Atlantic City.  
 Bergen—J. Finley Bell, Englewood.  
 Burlington—M. W. Newcombe, Brown's Mills.  
 Camden—Ernest G. Hummel, Camden.  
 Cape May—Clarence W. Way, Sea Island City.  
 Cumberland—Earl C. Lyon, Bridgeton.  
 Essex—Frank W. Pinneo, Chairman, 439 Mt. Prospect Avenue, Newark.  
 Gloucester—Ralph H. Hollinshed, Westville.  
 Hudson—Arthur P. Hasking, Jersey City.  
 Hunterdon—Austin H. Coleman, Clinton.  
 Mercer—A. D. Hutchinson, Trenton.  
 Middlesex—R. L. McKiernan, New Brunswick.  
 Monmouth—John C. Clayton, Freehold.  
 Morris—Edward Ackerman, Dover.  
 Ocean—E. G. Herbener, Lakewood.  
 Passaic—Chas. R. Mitchell, Paterson.  
 Salem—R. M. A. Davis, Salem.  
 Somerset—Lancelot Ely, Somerville.  
 Sussex—Fred'k H. Morrison, Newton.  
 Union—Chas. H. Schlichter, Elizabeth.  
 Warren—L. H. Bloom, Philipsburg.

#### Ex-officio:

The President—James S. Green, Elizabeth.  
 Recording Secretary—J. B. Morrison, Newark.  
 Treasurer—Elias J. Marsh, Paterson.

## A VISIT TO THE MASSACHUSETTS GENERAL HOSPITAL.

(Letter from John Hammond Bradshaw, M.D., F.A.C.S., Orange, N. J.)

"As human beings are pretty much alike inside, so are hospitals." (Cushing).

I wanted to visit the Massachusetts General Hospital because it is different. Within its portals have occurred 3 epoch-making events. Here was demonstrated the performance of the first surgical operation under ether. Here also worked Reginald Fitz who gave the first accurate description of appendicitis. It was Morris who had said that if a torch was put on the grave of everyone dying of appendicitis the whole country would be aflame. So here even the name "appendicitis" was born. Here Richard C. Cabot conducted his studies and work in social service for the sick and especially for the hospital patient. Stop and think a moment what this has meant. Before Cabot, effort was made of course to house, feed, operate upon and nurse the sick. When the patient was discharged he was likely to be lost to sight and often forgotten. Before Cabot it was indeed seldom that even the careful doctor understood the term "follow up". It is difficult for us to now believe that such vitally important details of a case as home life and environment, economic conditions and worries of the patient, his religious reactions, his moral status, his educational advantages—his daily mode of living—his very ego—which so largely determines his protracted invalidism or his recovery, were before the year 1906 almost entirely neglected in our hospital records. It was within the walls of the hospital that Oliver Wendell Holmes did his daily task. Here he gave birth to the word "anesthesia". Surely this was some accouchment!

With such a background and with such names as Bigelow, Channing, Jackson, Shattuck, Warren, Bowditch, Holmes, Fitz, Codman, Richardson, Mumford and Cabot, to say nothing of the eminent and efficient staff of today it is only right that the Massachusetts General Hospital should be not only one of the chief hospitals of New England but of all America or even of the whole earth! What hospital anywhere has to its credit better conduct marks?

My first request was to see the historic "Ether Dome". One of the heads of the training school which school by the way was started in 1874, making it one of the very first training schools for nurses in America) kindly accompanied me to this shrine of the surgeon. And it rightly should be a shrine for all time! A true ethereal (sic) blue dome spreads its protecting arms over a large square room holding the identical operating chair where on the sixteenth of October, 1846 Thomas Green Morton administered ether to the patient who was to undergo a surgical operation (for nexus of the neck), which Dr. John C. Warren performed upon a man named Gilbert Abbott. After he had recovered, the patient electrified his hearers by stating that he had suffered absolutely no pain. The surgeons looked into each others faces and Dr. Warren turned to the spectators and exclaimed, "Gentlemen, this is no humbug"! (This is history.)

Now I want also to write a few historical words upon this epoch-making discovery, invention, performance, experiment or whatever we may name it. If one looks up the old recorded pages of operations one notes such a statement as this: "the patient was then untied".(!) It is dif-

ficult for us now to realize the amount of human suffering that was on that October day relieved for all time! Now, who did it? I will freely quote from an address by Dr. William H. Welch, on this subject. Nitrous oxide was discovered by Priestley in 1776. About this time Sir Humphry Davy, a young man, began the study of medicine. In a paper he wrote that was called his "Researches", is found this memorable sentence, "As nitrous oxide in its extensive operation seems capable of destroying physical pain it may probably be used with advantage during surgical operations". But this pregnant suggestion, made as far back as our American Revolution, remained unheeded for 40 years. Davy soon gave up medicine and transferred his activities to other fields. It remained for a poor unknown dentist, Horace Wells, of Hartford, Conn., to first give nitrous oxide for the pulling of a tooth (his own)! But as late as 1839 the great French surgeon, Velpeau, wrote: "To escape pain in surgical operations is a chimera". The honor of making the first trial of anesthetic inhalation in surgical operations belongs to Dr. Crawford W. Long, a respected country doctor of Jefferson, Georgia, who in 1842 removed painlessly a small tumor from the neck of a James Venable anesthetized by ether. But he delayed publishing his experiment until the universal acceptance of surgical anesthesia! Until this great work by Long was known the first inhalation of an effective anesthetic for surgical purposes was generally assigned to Horace Wells. Now, Dr. Morton was a partner of Wells, and had been present(?) when Wells had his own tooth extracted under the gas. Charles J. Jackson, a chemist in Boston, had been experimenting with ether. Morton did work with Jackson and undoubtedly got ideas. A controversy arose between Wells, Morton and Jackson concerning their respective shares in the discovery of anesthesia. It was most bitter. One or more of the contestants become insane over it. But now a careful study gives the greatest honor to Morton and his claim was backed by such men as John C. Warren, Jacob Bigelow, James Jackson, Oliver Wendell Holmes, Haywood, Bowditch, Shattuck and many others of that day. If it was not at that time such a tragic subject (as one of the contestants took his own life) one might smile at Oliver Wendell Holmes' contribution to the controversy. He suggested a remedy to this contest of claims by saying why not settle the difficulty by erecting a statue and place it on Boston Common. Let the monument be carved with 2 faces, one side Morton the other side Jackson, and on the pedestal the inscription, "To Ether" (either).

But, in closing, I regret I have only space enough to tell but little of the Massachusetts General Hospital itself. It was about the time of the War of 1812, with England, that 2 progressive Boston doctors felt the need of better hospital facilities than the little town of Boston had. In 1810 an appeal was issued to the public in aid of a call for funds for the benefit of a general hospital. But the first patient was not admitted to the hospital till September 3, 1821. From that day dates its honorable career. The selection of Chas. Bulfinch as architect was most fortunate. The building then was the handsomest in the state. It was built of Chelmsford granite and the stone was chisled by convict labor at the State's Prison. The names of Dr. Jackson and Dr. Warren will always be held in reverence as its sponsors. The cost of a house-patient in those days was \$4.62 a week! (according to the last report it is with strict economy



\$5.70 a day now). The hospital at first could care for about 40 patients. It now can within its walls look after the wants of about 500 patients while many thousands yearly crowd its out-patient departments. Most interesting to me was to see the same old wards now over 100 years old, and filled with patients. But this modern hospital is up to date in all its departments and all its appointments. Its celebrated x-ray department dates back to the very first year of the Wilhelm Konrad von Roentgen discovery (in 1895). It should for all time be named the Walter James Dodd Department for Dr. Dodd, neglecting the preventions as we all did in those early days received x-ray burns from which he finally died a martyr to his hospital. I went from one of its multiple suites of operating rooms to another knowing I had witnessed real surgery and I was received with courtesy and attention and given many privileges I had no claim or special reason to expect.

## Lay Mirror Reflections

### DOG VACCINATIONS TO CHECK RABIES.

From all over the state come reports of the increasing incidence of rabies, and our State Health Department's appeal to the last General Assembly for a law to require vaccination of dogs is shown to have been an instance of wise foresight. Unfortunately, the Legislature would not listen—the scene in the House of Assembly when this Bill was under discussion was a disgrace to a supposedly deliberative legislative body—and a certain number of people of this state must pay with their lives the penalty for this stupidity. It is not surprising, therefore, to find such news items as the following, clipped from the Newark Evening News and the Atlantic City Press:

#### MONTCLAIR URGES DOG VACCINATION TO CHECK RABIES.

(Newark News, April 29, 1926.)

Declaring there has been a considerable number of cases of rabies within the last few weeks, Montclair authorities today called attention to an ordinance of the town requiring that dogs which run at large shall be muzzled or vaccinated. Vaccination clinics will open Monday.

"As the proper muzzling of dogs is difficult and in many cases impossible," states the Town Commission in an announcement, "the town has arranged for vaccination clinics where your dog can be vaccinated at a minimum of expense and trouble, and it is believed that many will take this opportunity to avoid the use of muzzles.

"Beginning with Monday, and continuous for four weeks, Dr. Phineas Bridge of Montclair will vaccinate dogs presented to him between the hours of 11:30 A. M. and 1 P. M., as follows: Mondays, at the fire-house on Harrison Avenue and Cedar Street; Wednesdays, Walnut Street fire-house, near the Erie Railroad station; Fridays, Upper Montclair fire-house, Valley road,

near Bellevue Avenue. The charge for this service will be \$1.50.

"Citizens are urged to take advantage of these clinics promptly. Do not call Dr. Bridge for appointments at these clinics, as no definite appointments can be made.

"Having provided the services as described above, the town intends to rigidly enforce its ordinance and dogs found not wearing properly attached muzzles, or bearing a vaccination tag, will be taken to the pound and if not claimed and the fine paid they will be destroyed."

(Newark News, June 3, 1926.)

A squad of five inspectors has been organized by Health Officer Craster to tour the city on motorcycles in quest of unmuzzled dogs. The squad began its work yesterday. The purpose is to enforce the ordinance which requires that all dogs be muzzled or on leashes when on the streets from June 1 until October 1.

Dr. Craster declared that the squad was assigned because of the increasing number of persons bitten by dogs. There are too many dogs running at large, he said. The only time in the summer that dogs will be permitted to be unmuzzled is when they are in their owners' yards or homes, Dr. Craster declared.

The motorcycle squad will check up on the owners of all dogs found unmuzzled or unleashed on the streets. Summonses will be issued and Dr. Craster will ask the courts to impose fines.

The city has been divided into districts with two men assigned to each and the fifth to travel alone to investigate complaints about dogs. A sixth man, who is assigned to the Health Department as a chauffeur, will be used in cases of emergency. The men are under the supervision of Chief Inspector William H. Young of the sanitary division.

The strap muzzle, which prevents the dog from opening its mouth, is condemned by Dr. Craster as inhumane. He recommends the wire cage muzzle.

### WOULD VACCINATE DOGS FOR RABIES.

#### Virginia Physician Says Treatment Is Effective Bar to Infection—Would Make It Compulsory.

(Atlantic City Press, May 28, 1926.)

Compulsory vaccination of dogs for immunity from rabies is being advocated by physicians in Ventnor and endorsed by police authorities as a protection against a public danger.

Vaccinating dogs has been privately practiced in Ventnor for years by a few families, or rather by their physicians. But since the recent genuine case of hydrophobia in Mays Landing, the number of pet dogs that have had the anti-rabies serum injected into them has increased.

One prominent physician asserted that he vaccinates his two dogs regularly every year and does the same thing for his patients who own dogs. He advised them to go to a veterinary for the operation, but they declared he must do it or they would let the dogs go without. So, in the public interest, he said, he performed the operation, a slight one, and others are following his example.

"This anti-rabies serum never affects the dog."

said another physician, "but it makes him immune from rabies in case he is bitten by a mad dog. It is something that should not be neglected, as one never knows when a stray dog, afflicted by rabies, may wander into Ventnor. Hydrophobic dogs are known to travel long distances and snap at other dogs, as well as human beings who are in the way. The Mays Landing dog that was killed and afterwards discovered to have rabies might have bitten many other dogs as far as anybody knows.

"If so, where are those dogs now? They may be wandering around and their affliction may break out at any moment, anywhere. It is in the public interest and safety that dogs should be made immune from rabies if attacked by a mad dog."

Police Chief Harry Frings said a keen watch was kept by all patrolmen on their beats for any dogs at large that are acting abnormally. Since the dogcatchers' drives on "strays" Ventnor is no longer overrun with dogs running loose everywhere. But the chief believes that vaccination, if made compulsory for dogs, would make the city much safer, or make the residents feel safer, this summer when visitors are expected to be there in greater numbers than ever before, and bring dogs with them.

Ventnor physicians generally are said to favor a city ordinance making dog vaccination compulsory. "In some towns up north," said one physician, "anti-rabies vaccination is made compulsory as hydrophobia is considered a public danger."

### MISHAPS TO CHIROPRACTORS.

(New York Times, April 15, 1926.)

On the same day that the State Senate defeated the bill providing for the registration of chiropractors on proof of meeting certain educational requirements, fifteen followers of "physiotherapy" were haled into court here in New York and held in \$500 bail for examination. What will happen to them later remains to be seen, but such evidence as served as basis for the charges on which they were arraigned showed that they have been doing what has been illegal and what the Senate decided should continue to be illegal.

No doubt they will be able to present witnesses willing to swear to having received benefits from their uncovenanted ministrations—usually after "the regular doctors had failed to cure". And probably, in some instances, this testimony will be true. There are maladies for which such manipulations as the chiropractors give are effectual, and in still more numerous cases the chiropractors can exercise a power of suggestion that does the business when only suggestion is needed. There will be no witnesses, at least for the defense, to tell of aggravations of illness they may have caused by manipulations not directed by knowledge.

What such folk as these want is to practice medicine without giving the time and paying the money that a real medical profession requires. If only they would get that, they could manipulate all they wanted to.

### Barnum Never Had One.

For Sale: One registered Jersey cow with bull calf giving four gallons of milk.—(Ad in Neosho (Mo.) Democrat.)

## Observations from the Lighthouse.

### IODIZED SALT.

#### Is There Danger in its Household Use?

Inspecting his own kitchen supplies recently, the Editor was surprised to find that his table salt was coming from a patented container labelled "Iodized Salt", and further investigation disclosed the fact that this had been supplied by the grocer in response to the usual order for "table salt"; there had been no request for the medicated variety. The grocer, when questioned, admitted the substitute but explained that he had been induced to put the iodized salt in stock and to supply it generally in filling orders, under the impression that he was rendering a health service to his customers. We promptly requested discontinuance of such service to us, explained our preference for plain salt, and advised sale of the iodized salt only on special orders.

The grocer was innocent, of course, of any intentional harm, and doubtless the wholesale dealer and the manufacturer of this iodized salt were likewise guiltless; they probably believed they were public benefactors. But, here is an excellent example of the basic truth in the adage—"a little knowledge is a dangerous thing". Recognizing the great value of iodine as a means of preventing goiter, when administered in the food or drink of children living in districts where the normal water supply lacks that element, these good people have jumped to the conclusion that everyone should be compelled to ingest a certain amount of iodine daily and that this can be accomplished by salting everyone's food with iodized sodium chloride. They entirely overlooked the possible dangers from feeding iodine or iodized preparations to persons in other parts of the country, who secure a sufficient quantity for physiologic purposes, and even to adults in the regions where iodine is lacking in the water.

That iodized salt has been a definitely harmful agent when used indiscriminately by adults is clearly set forth by C. L. Hartsock (J.A.M.A., 86:1334, May, 1926) in a study of several groups of cases treated during the past year at the Cleveland Clinic. Impressed by a marked increase in the incidence of hyperthyroidism, and particularly by an unusual type of thyroid hyperactivity occurring in men, he and his colleagues investigated these cases with special reference to the possible etiologic factors involved, with the result that the evidence seemed to point conclusively to the continued ingestion of small amounts of iodized salt as the primary exciting factor. For this reason they feel it is important to call the attention of physicians, and through them of the public, to the misunderstanding that has gradually arisen regarding the use of iodine in endemic goiter, particularly in the form of iodized salt. Without any precaution being given for its use, this salt is being vigorously promoted by the combined propaganda of health officials and of salt companies who have gradually created the impression in the lay mind that iodine is a panacea for all goiter conditions and will ultimately solve the whole endemic goiter problem. The resultant extensive use of iodized salt appears to be a plausible explanation of the fact that between 25% and 50% of all the cases of hyperthyroidism in which operation has been done in the Cleveland Clinic during the last 6 months seemed to have been directly due to or exacerbated by this agent.



A study of the group of cases in men which first called attention to this subject shows that they were all in excellent health before the onset of toxic symptoms, which were first noted 1-18 months after use of salt was begun. In only 2 cases was the iodine used because of a supposed need of the patient himself, the other patients being innocent victims of the general use of the salt in the family cooking. In most of these cases the initial symptom was loss of weight or marked weakness, particularly of the legs; the nervous and cardiac symptoms appeared later, usually occurring in a reverse order in the noninduced form of hyperthyroidism. Exophthalmos was almost invariably absent, the ocular signs being limited to a staring expression. The thyroid differed markedly from the usual type, as it was almost invariably a small, firm and scarcely palpable gland. The pathologic report in these cases, usually "colloid goiter" or "very mild hyperplasia", was also strikingly different from that usually given in cases of hyperthyroidism. The presence of foci of infection was demonstrated or suspected in every case, and it would be interesting to try to trace their influence in the production of the hypersensitive condition which can be so affected by iodized salt. The most plausible explanation for the high incidence of this disease in men is the fact that men as a rule use a great deal of salt. Previous to the past year such cases as these have rarely been seen in the Cleveland Clinic although on an average 1500 cases of hyperthyroidism are treated here annually.

Among other groups in which symptoms closely followed the initial use of iodized salt was one of 18 women, between the ages of 45 and 65, whose histories were identical in almost every respect. In every instance the patient had had a large neck or a lump in the neck throughout adult life but had never experienced any trouble until a friend, the grocer, or a newspaper article had persuaded her that iodized salt was good for goiter and she had begun to use it in cooking. Examination revealed a fetal or large colloid adenoma in every case with the usual signs of hyperthyroidism, particularly degeneration of the heart muscle with decompensation. Thirty-two other patients might be included in this group, but they had had symptoms before using the salt and the resulting exacerbation of the symptoms was so great that an operation was required in every case. Moreover, the cardiac decompensation was so marked in many of these cases that the operative risk was greatly increased. The medical profession has always considered this type of goiter as extremely susceptible to the effects of iodine and has exercised great care in its administration; but unfortunately this precaution has been overlooked in the enthusiasm over the new "cure".

Another type of patient has also appeared at the Cleveland Clinic during the past 6 months—a type in which it has always been thought that iodine could be administered almost ad libitum—young girls at the age of puberty, either with or without a struma. Five cases of outspoken and extremely severe hyperthyroidism in girls from 12 to 18 years of age have been seen during this period and in all these cases the hyperthyroidism developed coincident with the use of iodized salt. The recurrence of hyperthyroidism in 3 patients who had enjoyed good health from 4 to 13 years after thyroidectomy was also attributed to the use of iodized salt. It should be noted that after an operation for hyperthyroidism patients are highly sensitized to iodine, and therefore special precau-

tion should be exercised against its use in post-operative cases.

Very few cases of outspoken hyperthyroidism were seen in patients between the ages of 20 and 35, but there were many who, after using the salt, had suffered from nervous symptoms and who later developed frank cases of hyperthyroidism.

In connection with the foregoing the author notes 2 points of interest: (1) iodine rashes have been appearing frequently of late in the dermatologic clinic; (2) cases of acne vulgaris become much worse or will not respond to treatment while iodine is being used in the form of salt.

In giving a brief history of goiter treatment, Hartsock notes that it was not until 1907 that Marine and his co-workers discovered that all thyroid hyperplasia was practically the same and due to a certain lack of nutritional elements in the food; that a resting state could be induced by the administration of iodine. Kimball, under the direction of Marine, began the systematic study of the prevention of simple goiter in man giving iodine in small amounts to several thousand school children in Akron, Ohio, from which he derived the following conclusions: (1) simple goiter can be prevented by the administration of small amounts of iodine; (2) in one-third of the cases of simple goiter cure or marked improvement is effected by the internal administration of a small amount of iodine; (3) the administration of small amounts of iodine does not produce a toxic condition (exophthalmic goiter); (4) the administration of 2 gm. sodium iodide twice yearly is practical and economical and can be recommended as a public health measure in goiter districts.

In applying these principles to the use of iodized salt, Hartsock notes that: (1) Kimball and Marine worked entirely with children who, as a rule, are immune to the effects of iodine, whereas the use of iodized salt is generally not limited to children; (2) in Kimball's investigation iodine was given twice a year, thus allowing the thyroid a period of rest, whereas iodized salt is given continuously; (3) Kimball's observations were based on cases of simple and uncomplicated goiter, whereas most cases of chronic goiter in adults are adenomatous in character and these patients are not under observation while taking iodized salt; (4) Boothby and Plummer found that iodine was contraindicated in cases of hyperthyroidism due to toxic adenoma.

Hartsock states that both Crile and Phillips of the Cleveland Clinic agree that the general use of iodine will never be free from danger unless supervised by the medical profession for whom they give their own conclusions regarding its safe and proper use. (1) Administered to children under the age of puberty iodine is an efficient preventive of simple goiter. (2) At the age of puberty, before iodine is prescribed, a careful examination of the thyroid gland should be made by a physician to determine whether fetal adenomas are present. If so, iodine should be used with great caution, if at all. (3) The continuous use of iodine should never be prescribed for adults; when its periodic use is indicated frequent observations of pulse and weight should be made. (4) Under no circumstances should iodine be given to adults with fetal adenomas, except for a short period preceding operation. (5) In adults with simple large colloid goiter or large colloid adenomatous goiter without fetal adenoma, iodine sometimes has remarkably beneficial results but it should be

administered with extreme caution as it is this type of goiter that may become suddenly and overwhelmingly active. (6) If compound solution of iodine, or iodine, is administered in cases of exophthalmic goiter in which operation is not to be done, it should be discontinued or greatly reduced when the basal metabolic rate is lowered and clinical symptoms improve. Continued use will often again overactivate the thyroid gland. (7) Iodine should not be administered to a patient who has recovered after a thyroidectomy unless hyperthyroidism exists, and even in these cases thyroid extract is usually more satisfactory. (8) Iodine is most efficiently administered and controlled in the form of chocolate tablets containing 10 mg. organic iodine, or compound solution of iodine (Lugol's solution) when this is given under medical supervision. (9) Iodine may be administered in small doses to the pregnant woman for prevention of goiter in the fetus, but it must be used with extreme care as the thyroid gland is in a very unstable condition during pregnancy. (10) When overactivity of a thyroid gland has been induced by iodine, it usually does not subside when the iodine is discontinued. An operation is usually required.

In view of the facts that have been cited, the author believes that community administration of iodine disregards physiologic facts concerning the effect of iodine on the thyroid gland. The use of iodized salt, in particular, should, in his opinion, be discontinued or limited to the periodic table use of children under the age of puberty.

#### Community Goiter Prevention and Education.

That the incidence of goiter is constantly increasing is due, according to W. J. Potts (Illinois Med. J., 49:316, April, 1926), to the greater demands on the mental and physical reserves, greater skill in diagnosis, and still further depletion of the iodine supply. In the Great Lakes basin, the Pacific Northwest and Switzerland the problem has become extremely acute. The period of experimentation in the treatment of goiter is past. It is now universally agreed that small amounts of iodine given routinely during the 2 periods of thyroid overgrowth, pregnancy and adolescence, will absolutely prevent the deformity. The first period is easily in the control of the medical profession. By the administration of small amounts of iodine weekly to every pregnant woman not having an adenomatous goiter, a normal thyroid in mother and child is assured. The best way to reach the children is through the schools. In no case would the iodine be given without the consent of parent or guardian and special emphasis is placed upon the fact that this is not a therapeutic but a preventive measure. The consensus of opinion is that 10 mg. iodine preferably in the form of a palatable chocolate preparation, given weekly throughout the school year is sufficient. This should be given to the children from the fifth through the twelfth grade. The dangers of giving small amounts of iodine to large numbers of children are negligible.

The question of iodized salt naturally arises. Why not advocate its general use as is being done by law in Michigan and eliminate all the administrative detail? To this procedure the following objections have been raised: There is no control of dosage; there is no check on results; above all, a certain percentage of adenomas are made toxic by small amounts of iodine. As long

as there is some uncertainty concerning the giving of iodine to adults with adenomatous goiters, as occurs in the use of iodized salt, this author believes the plan of iodine administration in the school is the method of choice.

#### Canned "Gold Fish" for Prevention of Goiter.

From the Laboratories of the Northwest Branch, National Canners Association and College of Fisheries, University of Washington, Seattle, comes an article by Norman D. Jarvis, Ray W. Clough and Ernest D. Clark (J.A.M.A., 86:1339 May, 1926) calling attention to the remarkably high iodine content of salmon as an article of food. An accompanying chart shows the iodine value of 2 of the 5 species of salmon (containing the highest and lowest amounts of iodine) contrasted with that of milk, meat, eggs, vegetable and fruit products highest in iodine. Calculated on a moist basis in parts per billion the chart gives the following values: red salmon, 405; chum salmon, 222; lemon juice, 136; butter, 106; eggs, 22; wheat, 19; potatoes, 18; apples, 6; milk, 5; beef, 5. The iodine content of fresh salmon is approximately that of a canned salmon produced from the same region. Those edible portions of the body richest in fat have been found to be highest in iodine content, while a considerable portion of the iodine in fruits is contained in such inedible portions as the rind and seeds. Canned salmon consists only of the edible portion of the fish in which all the iodine may be utilized. Because of its cheapness and availability it is particularly suitable as a prophylactic agent in goitrous regions.

## Clinical Reports.

### THE USE OF ALPHA-LOBELIN AS A RESPIRATORY STIMULANT.

G. T. Spencer, A.B., M.D., Elizabeth, N. J.

Cisternal puncture is hazardous when it involves such factors as: (1) An operator who is not familiar with the anatomy of the parts involved. (2) An operator whose muscular coordination and control are not good. (3) Insertion of the needle further than 3 cm. in children, 4.5 cm. in small or lean adults, or 6 cm. in large adults. (4) Withdrawal, except in certain cases, of more than 5 c.c. of spinal fluid. (5) An unruly patient. (6) A patient with a neoplasm of the medulla or cerebellum.

However, the consensus of opinion seems to be that when carefully performed upon selected cases, puncture of the cisterna cerebello-medullaris may be considered as without danger. Its technic, once learned, is simple. It consumes less time and energy than lumbar puncture, and usually causes less discomfort to the patient.

A short series of cisternal punctures has yielded results which appear to coincide with those generally obtained elsewhere. In each instance the procedure was without technical difficulty, the spinal fluid bloodless and free-flowing, and no post-puncture leakage, hemorrhage, pain, or reaction followed.

In one particular certain of these cases may vary from the usual *modus operandi*. On the principle that an unrestrained patient, if hurt or unduly frightened, will move away from the oper-



ator (which is less likely to cause injury than are indeterminate struggles against physical restraint) 7 of this series were instructed to hold their own necks flexed by clasping their hands over the parieto-occipital region, and informed that they would feel uncomfortable—"just as if being pushed off the table"—but that any real pain would be unlikely. Procain (0.5% with 1:1000 adrenalin chlorid in normal salt solution) was used for local anesthesia. The results were highly satisfactory.

In an extra-series case no spinal fluid was obtained after the needle was introduced to a depth of 6 cm. at which point it seemed but prudent to withdraw. Pfister ("Zur Punktion der Cisterna magna." Munch. Med. Wochens., May 9, 1924) has reported a case in which the patient ceased to breathe when the needle was inserted over 6.5 cm., although recovery ensued after several hours performance of artificial respiration. In this connection it will be interesting to hear reports of the use of Alpha-Lobelin as a respiratory stimulant, both intravenously and intraspinally, when the medulla is accidentally injured; and if Alpha-Lobelin is as therapeutically efficient as the literature thereon avows, to have a dose of it ready for emergency administration during every cisternal puncture operation would seem an excellent precautionary measure.

## National Medical News.

### RESUME OF RECENT ANNUAL CONVENTION MEDICAL SOCIETY OF THE STATE OF NEW YORK.

As has been well shown by the recently inaugurated conferences of officers of the medical societies of New York, Pennsylvania and New Jersey, the problems and interests that concern the physicians of this large territory are of uniform nature and vary but slightly on the different sides of geographic boundary lines. We have just published a summary of our own State Society Meeting, and it seems timely to present a brief review of the convention of our northern neighbor, for whatever benefit may be derived from a comparison of the questions considered and actions taken by these neighborly organizations. Three months have elapsed since the New York meeting but this somewhat belated review, publication of which has been delayed for want of space, will possibly be of greater value now because of our own convention being still fresh in mind.

Under the presidency of Dr. N. B. Van Etten, the New York State Society met in New York City, March 29-31, with a registered attendance of 1229. One important feature of the Presidential Address consisted in reference to the attitude of the public toward preventive medicine.

"For the prevention of typhoid fever, tetanus, small-pox and diphtheria we have specific vaccines so reliable that those who know about them and fail to use them are morally culpable. In my opinion this statement is quite as applicable to the lay people who know, as to the physicians who know. It is a national disgrace that we had more than 4000 cases of small-pox in the United States in 1 month of last year, with a total of 31,037 for the year. It is a national disgrace that our people care so much more for matters of convenience than for the protection of the lives of their children, that they care so much for what they are pleased to call personal liberty

that they are willing to expose their fellow citizens to the potential ravages of a loathsome disease. It is with no feeling of pride that we compare the record of that month with its 4000 cases of small-pox, with the record of no cases of small-pox in that same month among the disciplined and vaccinated citizens of Germany.

"In the light of the truth of this statement one easily sympathizes with the pessimism of many at the beginning of any public health campaign. Toxin-antitoxin as a preventive of diphtheria has been known 10 years and yet the public does not clamor for protection of their children that they pretend to love so dearly. Thirteen thousand of them died from diphtheria last year and there was no excitement about it; 700 died in the City of New York, and there were 10,000 cases here. If 10,000 people had been burned in a fire and 700 of them fatally, the country would have gone into mourning. Is it any less disastrous to have them die from a preventable disease?"

"A campaign in Preventive Medicine, such as one to eliminate diphtheria can be started by one or more executive organizations, but it can not be carried to successful and lasting conclusions except by the physicians meeting this spirit of coöperation with the warmest reciprocity and the will to put over and maintain a complete victory over a dread disease.

"The physicians of the State must awaken and rise to the leadership that is waiting for them not only in the fields of preventive medicine that have been well demonstrated, but in the conflict with enemies that are still surrounded by obscurity, and also in the fight for supremacy over an apparent racial decadence through reckless breeding and the lowering of our moral and physical standards by luxurious living."

As a special committee of the State Society had devoted a great deal of time and labor to consideration of postgraduate instruction and the devising of some means to make such study available to county members, Dr. Van Etten anticipated that committee's report with the following generalized reference to medical education:

"We neither need nor desire a less competent physician; the curriculum will be adjusted to meet the changing order. I would rather lengthen it than shorten it, but I would not terminate it later. I would add a year or 2 at the beginning of the course and make his ancillary education more definitely medical. I would broaden his vision by showing him the history of medicine, and I would improve his manners by a real course in medical and social ethics. I would teach him anthropology. I would have him taught methods of complete investigation, so that no subjective symptom should be dismissed without attention. I would have him study physiotherapy so that he would be able to appraise its value. I would require of him a period of the general practice of medicine so that he might acquire broad fundamental knowledge before he should be permitted to enter a postgraduate school to qualify himself for specialized endeavor.

"Every doctor needs postgraduate education every year, and most of them feel that they are unable to leave their active work to take courses within the walls of teaching institutions. They may be able to attend meetings of medical societies where they usually listen to ultra scientific discussions which are often unintelligible except to a few advanced students, most readers thinking that unless they present rare cases their work will not attract attention."

### Diphtheria Prevention.

In line with the President's reference to preventive medicine, and with a plan of campaign already laid out by the Committee on Public Health in coöperation with the State Board of Health, the following resolution was presented with the endorsement of the Executive Committee and adopted by the House of Delegates:

"That the President shall appoint a committee of 10, which shall include a member from the State Department of Health, and from the State Charities Aid Association, the Director of the Academy of Medicine, the President of the State Homeopathic Society, the Chairman of the Committee on Public Health and Medical Education, the Chairman of the Committee on Economics, the President and 3 other members of the Medical Society of the State of New York, for the purpose of formulating a plan of campaign to make toxin-antitoxin available to every child in the State of New York and place the responsibility for its distribution upon the Medical Profession of the State in such a manner that every Practitioner of Medicine who wishes may have a part in its administration."

In so far as this campaign has developed in selected cities or counties in New York the results have been remarkably pleasing. For instance, the city of Auburn has had not a single case of diphtheria in more than 2 years. Adoption of a similar campaign in New Jersey is under consideration and it is hoped we may soon be profiting by this excellent example of our neighboring state.

### Postgraduate Study.

The most interesting committee report presented for consideration was that relating to Postgraduate Medical Education, Dr. Charles A. Gordon, Chairman. Your attention was called to Dr. Gordon's fine work in our last reported Tristate Conference (June Journal, page 305). The plan has proved so successful that New York State will expand it and extend its application considerably during the coming year. A questionnaire is being devised for submission soon to our own county society officers to ascertain whether and to what extent this movement may be applicable to the needs of New Jersey physicians.

### The Trained Nurse Problem.

Having discussed the "Nurse Question" at previous meetings, the New York State Society appointed a special committee, at the Syracuse meeting, in 1925, to study the question from all angles and to report recommendations. The report submitted by Dr. A. W. Booth, Chairman of the committee, presented a very comprehensive study, and those who are especially interested will do well to read it in full (New York State Journal Medicine, 26:438, May 15, 1926). The committee's conclusions are embraced in the following abstract:

"The economic advantage, to a community, of highly trained nurses is often overlooked by those who are so urgently insisting upon a lowering of present standards by way of stimulating the production of strictly bedside nurses.

Undoubtedly the work of the Public Health nurse is instrumental in forestalling a great amount of sickness through preventive measures and intelligent instruction of the masses in health and hygiene. The necessity for highly trained women to supervise departments and instruct classes in hospitals is obvious. The present method of obtaining these is to require the

registered nurse to pursue a postgraduate special course. Manifestly whatever changes may be suggested in our system of nurse education, provision must be made for a continuance of the present program of educating nurses in hospitals, leading to an R. N. degree.

Contrary to the opinion sometimes expressed, all Registered Nurses do not go into the higher activities, but many remain as very superior bedside nurses throughout their career.

It already has been mentioned that the expense of maintaining an Approved or Registered Hospital is so great as to become prohibitive for many hospitals whose value and necessity in their respective communities are unquestioned. These institutions have left to them the alternatives of either employing graduate nurses to run their wards and departments, or conducting training schools whose graduates can not hope to register as Trained Nurses, or ever be recognized as such in this State. These Institutions find the greatest difficulty in securing pupils for training on this account.

In view of the fact that there is an all too apparent need for more nurses of the bedside type, our conferences discussed the desirability of establishing a course of training particularly suitable for this type and one which could be provided at comparatively small cost by a number of hospitals unable to conduct a Registered Training School of present standards.

This course, for lack of better name, was called the Basic Training Course, to include only the absolute essentials of anatomy and physiology, hygiene, materia medica, obstetrics and gynecology, internal medicine, pediatrics, dietetics and surgery. The didactic lectures to be minimized and particular stress laid upon bedside technic. The entrance requirements suggested were at least 1 year of high school or its equivalent, and the course would cover at least 20 months preceded by a 4 months' probationary period.

A young woman passing through such a course should have a title consistent with the training. It was suggested that she might very properly be called a 'Hospital Graduate Nurse'.

The details of this plan require further study and your committee is not yet prepared to present a final program. The essentials of the plan were presented at a conference of hospital superintendents and prominent registered nurses and met with hearty approval. The State Education Department expressed a willingness to entertain the idea.

The question of part-time and group-nursing was discussed at our meetings and we were led to the conclusion that this phase of utilizing a nurse deserves more serious thought and study by interested groups of physicians.

There is an undoubted abuse of nurse employment by the luxury loving public. This is a very serious subject and there is urgent need for reform. An instance was mentioned where 1 patient employed 2 day nurses and 2 night nurses. A prominent New York physician mentioned that 13 special nurses were at that time attending patients in a strictly charity ward of one of the city hospitals. Instances of the above kind indicate a faulty distribution and utilization of our present supply of nurses.

One of the factors not hitherto mentioned as responsible for the dearth of bedside nurses is that the occupation itself has ceased to be attractive. This was well expressed by a commit-



tee of hospital superintendents who said, "Probably some of the most important reasons for the shortage of bedside or private duty nurses are the difficult conditions under which they work, the long hours, the unavoidable loss of time, the lack of an opportunity for home life, and last and in our judgment most important, the fact that there is a constant retrogression rather than opportunity for advancement as the years go on. Younger graduates see and feel this backward trend in the tired, worn-out, middle aged, private duty nurses whom they encounter in the hospitals and elsewhere, and they compare such work unfavorably with other branches which offer opportunity for advancement and personal development".

Regarding the nurses' fees and time on duty, the nurse after graduation is a free moral agent and her service to the community is controlled entirely by the basic economic law of supply and demand. No amount of legislation or regulation can arbitrarily determine her life. On the other hand, such nurses as choose to demand exorbitant terms can with justice be removed from the list of official registries.

### Recommendations.

Your committee recommends:

(a) That the Society go on record as approving the Official Nurse Registries and disapproving the commercial nurse registries so long as they fail to properly label the nurses whom they supply.

(b) That the Society approve of the suggested plan of a Basic Nurse Training Course; and that a committee be appointed by the President to confer with committees from the State Nurse Association, the State Hospital Association and the proper authorities within the State Education Department with a view of determining a suitable course of study.

(c) That the Society continue the study of the Nurse question for another year, and that the President be requested to appoint a special committee for that purpose.

The House of Delegates adopted this report, with its recommendations, and continued the committee.

### Medical Defense Insurance.

From the economic point of view, one of the most important features of the meeting was the discussion of satisfactory, and necessary, protection against malpractice suits. In the first place, Mr. Stryker, as Counsel for the society, reported that 132 suits had been instituted during the last fiscal year, and that 66 of these had been disposed of: 14 settled; 47 were dismissed or resulted in verdict for the defendant; and 5 resulted in judgment for the plaintiff. The comment of counsel on some aspects of this problem deserve your consideration: "The trend of the times in every other field of negligence law is unquestionably toward larger damages where juries find in favor of the plaintiff. The present value of the dollar is always taken into consideration, so that it is safe to say that where a jury 10 years ago might have rendered a verdict for \$10,000, it will now award double that sum or more. Juries have become increasingly liberal with the money of defendants in every other field of negligence cases, when they find against them. Almost limitless examples of this might be presented; for instance, in the United States District Court of Brooklyn a few days ago, a man who lost his leg while employed as a brakeman by the Western Maryland Railroad obtained a verdict

against the road for \$40,000. At about the same time a girl of 4 years of age was awarded in Justice Cropsey's part of the Supreme Court in Brooklyn \$25,000 for the loss of her right arm at the shoulder as a result of being run over by a car. There are now in counsel's files a large number of cases where the injuries claimed to have been sustained at doctors' hands are serious, where the bad result alleged is either death, the loss of an arm or a leg or other equally permanent injury. Thus far the doctors against whom suits for such serious injuries have been brought have been fortunate in not sharing the hard fate which so many other defendants in the negligence field have had to face. Malpractice is but one department of the law of negligence. Every time a doctor is called upon to face a charge of this kind in court, his chance of a verdict being rendered against him increases with the tendency of the times. The legal hazard of medical practice does not diminish—it constantly increases."

Regarding Group Indemnity Insurance and its protective value to the insured physician, Mr. Stryker said: "The group plan is working well. It is a great benefit and should be a great source of comfort to the profession at large. The insurance carrier is fully alert to the peculiar needs and the special demands of the medical profession and carries on its work with a full understanding and constant recognition that the primary consideration of the doctor at all times is the due consideration and just preservation of his professional honor. The writer, who has traveled during the past 3 years throughout the state in the defense of malpractice actions, has never heard a word of criticism of this well-conceived group plan. He has, on the contrary, on all sides heard commendation and appreciation of its value and importance to the Society and approval of its method of operation. From none, as might well be imagined, has more enthusiastic comment come than from those who were unfortunate enough to find themselves engaged in vindicating in court their own professional conduct. From time to time the writer sat through the nervous hours waiting for the jury's verdict, closeted alone with some doctor who had not availed himself of this insurance protection; he wishes he were at liberty to quote the words of sharp regret expressed by those who were awaiting their fate at the jury's hands, knowing that if the verdict went against them it spelled their financial ruin or heavy embarrassment."

When the Business Reference Committee reported to the House of Delegates upon matters submitted for its advice, the Chairman, Dr. Frederick Sondern, said regarding this particular matter: "The President's reference to the question of legal defense and insurance is one which deserves the earnest consideration not only of every member of this House of Delegates but of every member of the State Society. Malpractice suits are on the increase; defense for uninsured members is a burden of the Society to no small moment; and your committee recommends that it shall be the sense of this House of Delegates to urge upon every member in practice the carrying of a suitable policy for his own protection as well as to save the Society the expense of defending him in case of need. The moral support of the Society is his in any event and its members serve him as experts without pay in any event—but this is in the final analysis all that he shall ask."

We have particularly emphasized this feature because of its great importance to every practicing physician, and because we were recently in-

formed by officers of the New York State Society that the New Jersey Medical Society has in force the best group insurance policy that has been devised up to date. That every individual physician needs such protection can scarcely be doubted after reading the above. Our own State Society members have shown an increasing appreciation of the opportunity afforded them through the labors of a special committee and their Recording Secretary and Counsel, but there is still far too large a percentage of unprotected members.

The Scientific Program has been passed so far without comment, but that does not indicate its unworthiness in any sense; in fact it was unusually attractive and instructive. Perhaps the best feature was a very complete series of demonstrations, clinical, pathologic, and pictorial, of syphilis in all its phases. The principle is one that might well be adopted by our Society at future meetings.

## Current Events.

### PSYCHIATRY IN RELATION TO COURT PROCEEDINGS.

In view of the fact that our State Society, through its Welfare Committee, has for several years been considering ways and means for improving local conditions with regard to expert testimony, juvenile delinquency and the responsibility for crime, it seems justifiable to publish here in full the report of a special committee from the American Psychiatric Association, appointed 2 years ago to study the medical aspects of these questions. To the uninitiated, settlement of these problems may seem quite easy, but delving beneath the surface discloses a series of difficulties in the way of satisfactory solution. Before seeking new legislation bearing on either problem it will be well to understand some of the underlying factors, and this committee report may help to clarify the situation.—(Editor).

### CORRECTED FINAL REPORT, JUNE 10, 1926.

To the members of the American Psychiatric Association:

Your Committee on the Legal Aspects of Psychiatry made a preliminary report at the 81st annual meeting of the Association at Richmond, Virginia, on May 15, 1925. That report was printed in full in *The American Journal of Psychiatry*, Volume 5, No. 2, October, 1925, pages 306-311. Careful perusal of the report is recommended to the membership.

The committee asked for a continuation which was granted. It was decided to report in writing to the entire membership certain points of agreement and disagreement with regard to the various problems outlined in the questionnaire printed in the 1925 report. Members were then asked to indicate in writing their attitude toward the various points dealt with, mailing their comments to the committee. This enabled us to make indicated revisions in the final report, corresponding to the prevalent attitude and convictions of the majority of the members of the association. This final amended report is now respectfully submitted.

The committee felt that the problem assigned them was not merely one of what we as psychiatrists should recommend to the lawmakers in regard to bills regulating expert testimony. It

seemed to us that our problem was one of reinterpreting to society the function and the objectives of the psychiatrist, particularly in so far as these concern the type of behavior which is technically and popularly regarded as criminal. The committee felt that it was exceedingly important to divert the attention of the public from the relatively minor issue of alienistics to the major issue of psychiatrics.

In the practical application of psychiatry to problems of criminal law, the prevalent concepts of tradition and long usage conflict sharply with psychiatric attitudes. Popular theories of retribution and established methods of dealing with offenders almost entirely prevented a scientific envisagement of crime until recently when psychiatrists, in spite of their original limitation of field, discovered and demonstrated that types and trends of abnormal psychology extended far out from the asylum into the court room, school and home. The psychiatrists found their experience and technic equally applicable to the irascible employee, the retarded school child, the persistent stealer, the compulsive drinker, the paranoid murderer, and the textbook cases of epilepsy, melancholia and schizophrenia. Face to face with the legal partitions of misbehavior into "insane" and "criminal" psychiatrists now find themselves with no technical interest in these partitions and no general agreement with them but with a driving concern in all the unpropitious trends of human character; with all acts, thoughts, emotions, instincts and adaptations, either socially or individually adverse. Some of these constitute committable "insanity," some of them do not; but all of them are psychiatric problems.

The question of responsibility is constantly being raised and the psychiatrist is frequently asked to make definite statements regarding the responsibility of a particular subject. As White and Glueck have shown, however, the conception of responsibility is exceedingly vague. In a strictly legal sense it probably means the capacity to change one's conduct in response to the direction of certain painful associations. Of course this is not the sense in which the public understands it or uses it. In the latter case it is merely an echo, the antiquated crystallization of primitive and infantile reactions known as talion law. Of course no scientist has a moment's consideration for such emotionally determined policies or mystical concepts of atonement. There was a time when even inanimate objects were held to this kind of accountability. If a man tripped over a chair and injured himself, the chair was "responsible," and must be punished by being burned or broken. Until comparatively recent times animals were held responsible for injuries they committed; they were tried and convicted and formally sentenced. But ultimately inanimate things and animals came to be exempted from the ritual of responsibility, and slowly but progressively children, idiots, and finally most of the "insane" were likewise exempted. Various curious tests then had to be decided upon to determine the "responsibility" of persons suspected of "insanity" (or an "irresponsible" "insanity"). Once they were compared in appearance and conduct with wild beasts, later with the "mentality" of a 14-year-old child. This was actually the criterion of "responsibility"! Current even today in many states is the slightly less hoary "right or wrong" test, persisting in spite of common knowledge that people are actuated by various compulsions to do things they themselves regard as wrong in the most



shameful sense. Psychiatrists realize that the capacity to feel remorse does not imply power to control conduct.

The legal problem of responsibility evidently involves the philosophical problem of "free-will." Philosophy still debates the different issues of the question and science can hardly assume to give a final answer to them now. But the law stubbornly maintains that the question is closed. According to the law all persons of certain categories possess absolute freedom of will, and all persons of other categories possess none. Neither science nor philosophy can accept such a conclusion.

The scientist then, really cannot answer as to legal "responsibility," and he does not wish to participate in the ritual of "punishment." (Several members of the committee emphasize our professional interest in observing how it gratifies the craving of the crowd for atonement through vicarious suffering.) For his patients the psychiatrist seeks, not retributive action, but diagnosis and scientific attempt at therapy. This, in a sense, is an "inhuman" attitude, in that it is a departure from the instinctive mechanism that rules most of humanity; the clamor for vengeance is more "human". But treatment may sometimes be as painful as the sacrifice prescribed by the legal ritual. Opening a boil or setting a fracture may be painful, and the psychiatrist, too, may prescribe painful treatment, but it is never punishment (retributive).

The committee felt, therefore, that the bill covering the question of criminal responsibility was a problem upon which there was at the present time insufficient information and insufficient general agreement. Most of the members of the committee felt that the word "responsibility," as well as the word "insanity," and other similar static concepts should be eliminated entirely and endeavor made to determine rather the capabilities and incapacities of the accused, or a specification of whether or not the mental status (disease, defect, trend, etc.) of the offender was likely to lead to neglect or danger to himself or to others.

For this reason the proposal of the American Institute for Criminal Law and Criminology was not wholly approved. It was regarded as a good beginning step but it has two flaws, one of which is that it perpetuates the ambiguous and meta-physical term "responsibility"; the other is that it insists upon a particular state of mind without being able to define it. The committee has given careful attention to Sheldon Glueck's excellent book on Mental Disease and the Criminal Law and recommends it to the study of all members as a presentation of the legal status of various problems involved, without particularly favoring the author's specific recommendations for legal reform.

With regard to the burning question of expert testimony, the committee was in almost unanimous agreement that the recent Massachusetts laws offered the best practical technic so far presented. The committee is favorably impressed by both the Massachusetts and California laws. Various defects will no doubt appear; it is perhaps questionable whether sufficient examination is provided for and whether there is sufficient latitude for recommendations. Psychiatrists certainly do not wish to be limited to "Yes" or "No" reports, i. e., to specify whether or not a man should be sentenced. It is rather a question of how he should be handled, where he should be

kept, or what he should be given to do. The problem sufficient remuneration is another question involved to which the committee had no time to give. That these laws have faults is certain, but they represent an enormous step in advance, and they anticipate nearly all of the defects and faults of the present system of expert psychiatric testimony in criminal trials. Whatever the precise legal procedure adopted, the committee felt it imperative that all judges be authorized (obliged) to request psychiatric advice, the examinations to be made conjointly, the reports to be made in writing, and the remuneration to be made from public funds.

The committee unanimously favored an attempt to codify the commitment laws of the various states. "Insanity" has come to mean nothing but certifiability, i. e., the desirability of enforced hospitalization. It seems quite unnecessary to have a score of different methods for determining the desirability of this step. The committee recognizes, however, the great practical difficulties in achieving this codification and has no specific ways and means to suggest.

The following suggestions were made by members of the committee in regard to possible projects for our Association in a furtherance of the aims of public education referred to above:

(1) That the American Psychiatric Association delegate a committee to publish a volume on the present status of our knowledge concerning criminality and outline a standard procedure. This committee should coöperate with the National Committee for Mental Hygiene and the American Bar Association.

(2) That there be correlated herewith the practices in foreign countries as England, France and Germany.

(3) That a survey be made of the present work of psychiatric clinics in association with courts and prisons and the results published, particularly with reference to the practical achievements of these clinics. The public knows little enough of psychiatric theories in regard to crime, but knows even less about the medical work that is already being done in many places; hence such a study would not only afford a convenient and much needed reference for the use of social workers, legislators, judges, psychiatrists, etc., but would also serve as a basis for the dissemination of valuable educative information to an uninformed but eager public.

(4) That the American Psychiatric Association coöperate with the National Research Council, which is already considering research problems along this line and that a representative of the American Psychiatric Association be selected to function on the National Research Council.

(5) That this association should encourage uniformity of clinical statistics in prisons through contact with the American Prison Association.

(6) That there be an obligatory published review of the cases in which members of this association testify.

(7) That an annual report of cases, clinics, and of the situation in general, be presented to the American Psychiatric Association.

(8) That The Journal of the American Medical Association be assisted by the American Psychiatric Association in presenting to its readers a comprehensive and progressive account of psychiatry and criminology with the aim of educating the medical profession itself in psychiatric and criminologic problems.

These suggestions merit further discussion.

For the present, your committee specifically recommends the following proposals for immediate action:

(1) That the American Psychiatric Association go on record as favoring certain types of legislation such as the recent Massachusetts enactment which put the psychiatrist in a position of counselling the legal authorities as to the disposal of social offenders.

(2) That the American Psychiatric Association set up, agree upon, and publish official standard qualifications of medico-legal experts, and that it maintain a published list of such qualified experts, revised annually, for the convenience of court selection.

(3) That the American Psychiatric Association, in its annual conventions, give more attention to the problem of psychiatry as applied to crime and other behavior disorders including demonstrations of the work being done in penal and correctional institutions, behavior and child guidance clinics, and psychiatric clinics associated with criminal courts.

(4) That the American Psychiatric Association foster an attack on certain pressing problems of research in this field, particularly (a) the working out of a useful nosological classification of mental disorders which will take into consideration behavior pathology not now definitely defined or classified from a psychiatric standpoint, and (b) the analysis of the medico-legal situation in the various states of this country with particular reference to psychiatry.

(5) That the American Psychiatric Association advocate the association of a psychiatrist or a psychiatric clinic with every penal institution and with every criminal court, to act in an advisory and consulting capacity without administrative duties, and that it advocate the teaching of courses in Criminology in both law schools and medical schools by psychiatrists.

(6) That the American Psychiatric Association maintain a central bureau, either in the form of a standing committee or in the form of a full-time paid secretary, to aid in disseminating to the medical and lay public, in a dignified and accurate manner, news of the actual and potential contributions of psychiatry to present-day social life, perhaps coöperating with the National Committee for Mental Hygiene. Such a bureau should publish from time to time an official bulletin containing official statements of psychiatric attitude and opinion available to newspapers, magazines and the public at large.

(7) That the American Psychiatric Association officially accept, endorse and subscribe to the following statement of the present attitude of the members of this association toward the problems now under consideration and give it wide circularization.

#### Official Statement of Position.

We believe—

(1) That the psychiatrist's chief concern is with the understanding and evaluating of the social and individual factors entering into failures in human life adaptations.

(2) That crime is a designation for one group of such adaptation failures, and hence falls definitely within the focus of psychiatry, not excluding, of course, certain other branches of science.

(3) That crime as well as other behavior and

characterologic aberrancies can be scientifically studied, interpreted and controlled.

(4) That this study includes a consideration of the hereditary, physical, chemical, biologic, social and psychologic factors entering into the personality concerned throughout his life as well as (merely) in the specific "criminal" situation.

(5) That from a study of such data we are enabled in many cases to direct an attack upon one or more of the factors found to be active in a specific case to effect an alteration of the behavior in a propitious direction; while in other cases where this is not possible we are able in the light of past experience and discovered laws to foresee the probabilities to a degree sufficient to make possible proper provision against subsequent (further) injuries to society. By the same experience and laws we are enabled in still other cases to detect and endeavor to prevent the development of potential criminality.

(6) That these studies can be made with proficiency only by those properly qualified, i. e., scientists who have made it their life interest and study to understand and treat behavior disorders.

(7) That this point of view requires certain radical changes in legal procedure and legislative enactment, insuring the following provisions:

(a) The court appointment, from a qualified list, of the psychiatrists testifying in regard to the mental status, mechanisms, or capabilities of a prisoner; with opportunity for thorough psychiatric examination using such aids as psychiatrists customarily use in practice, clinics, hospitals, etc.; with obligatory written reports, and remuneration from public funds.

(b) The elimination of the use of the hypothetical question and the terms "insane" and "insanity", "lunacy", etc.

(c) The exemption of the psychiatrist from the necessity of pronouncing upon intangible concepts of religious and legal tradition in which he has no interest, concern or experience, such as "responsibility", "punishment" and "justice".

(d) The development of machinery adequate to the requirements of the psychiatric point of view in criminal trials and hearings, including court clinics and psychiatric examination of all offenders with latitude and authority in the recommendations made to the court as to the disposition and treatment of the prisoner.

(8) That this also entails certain radical changes in the penal practice, including:

(a) The substitution of the idea of treatment, painful or otherwise, for the idea of retributive punishment.

(b) The release of prisoners upon parole or discharge only after complete and competent psychiatric examination with findings favorable for successful rehabilitation, to which end the desirability of resident psychiatrists in all penal institutions is obvious.

(c) The permanent legal detention of the incurably inadequate, incompetent, and antisocial, irrespective of the particular offense committed.

(d) The development of the assets of the permanently custodial group to the point of maximum usefulness within the prison milieu, industrializing those amenable to supervised employment, and applying their legitimate earnings to the reimbursement of the state for their care and maintenance, to the support of their dependent relatives, and to the reimbursement of the parties injured by their criminal activities.



(9) That effective preventive medicine is applicable in the field of psychiatry in the form of mental health conferences and examinations, child guidance clinics, mental hygiene clinics, lectures and literature, and similar institutions and efforts.

(10) That the protection outlined provide an efficient and scientific solution to the problems of crime, viz:

- (a) The protection of society.
- (b) The rehabilitation of the "criminal" if possible.
- (c) His safe and useful disposition or detention if rehabilitation is impossible.
- (d) The detention and the prevention or deflection of the development of criminality in those potentially predisposed.

**RABIES CONTINUES A PUBLIC HEALTH MENACE.**

Henry B. Costill, M.D., Director,  
New Jersey State Department of Health

The number of specimens from rabid animals sent to the State Department of Health laboratories for diagnosis indicates that the disease is wide spread and more prevalent than physicians and health officials realize.

Number of Animals Found Rabid upon Examination at the State Department of Health Laboratories.			
Fiscal year ending June 30, 1924	.....	126	
" " " " 1925	.....	160	
" " " " 1926	.....	201	

These figures by no means indicate the total prevalence of rabies throughout the state. Many dogs' heads are examined in the Newark City and Hudson County Laboratories. In addition, we know that many dogs are killed and disposed of without examination. The disease is state-wide, heads having been received from all of the 21 counties except Hudson (which has its own laboratory.)

Persons bitten by rabid, or supposedly rabid, dogs eagerly seek the advice of physicians, and help is given freely. Health officials and practicing physicians should be equally responsive to requests for advice about the prevention of rabies. The efficacy of the vaccination of dogs by means of one injection of rabies virus is well established. Not only in foreign countries but in several states of this country the treatment has been tried on a wide scale, and rabies among vaccinated dogs has been extremely rare in sections where it has been prevalent among unvaccinated or controlled groups.

In our own state, the vaccination of dogs has been enforced in a number of communities with excellent success, and as far as we know only two dogs immunized against the disease, of the many thousands treated, have become rabid. The evidence to support the contention that treatment with rabies virus does protect animals is set forth in detail by Mulcahy in the Public Health News, Vol. xi, No. 1, December, 1925. Copies of this paper are available for physicians who wish to inform themselves on this subject.

We have no state law compelling the vaccination of dogs against rabies. City officials, if they will, may adopt ordinances providing for compulsory vaccination, but, in the absence of compulsion, education can do much to improve con-

ditions in respect to rabies. Health officials and practicing physicians are urged to make use of every opportunity to urge the owners of dogs to protect themselves by having their animals immunized against the disease.

**Advice to Persons Bitten by Dogs.**

Practicing physicians and health officials should inform all persons bitten by dogs that:

(1) Rabies in dogs progresses rapidly once the symptoms are evident; therefore, if a dog showing no symptoms of disease bites a person the dog should not be killed but, instead, should be confined and watched. If definite symptoms of disease do not develop within a few days, probably the dog was not rabid at the time the bite occurred.

(2) Dogs should not be killed until definite symptoms of rabies develop. Before that time a microscopic examination of the brain usually does not show the typical "negri" bodies. When the disease has become evident a laboratory diagnosis is possible. Persons bitten by a dog may begin treatment while the dog is under observation. The treatment can be discontinued if no symptoms develop in the dog. If the bite occurred upon the body or limbs of the person, it may be safe to await the beginning of treatment until symptoms of rabies become evident in the dog.

(3) Persons bitten about the face or upon the finger tips should always begin treatment while awaiting development of the disease in the dog.

(4) On the other hand, persons bitten by dogs showing symptoms of rabies should begin treatment immediately while awaiting the laboratory examination of the dog's head. Once symptoms of rabies have developed in a dog that has been under observation no time should be lost in beginning the treatment, for immunity does not develop until a week after the treatments are concluded, and if the person is bitten in such a way that the virus may directly enter a nerve—especially the nerves of the face—the disease may travel to the brain within a relatively short time.

(5) Every person should know that cautery is not a sufficient protection against the disease. Cautery with fuming nitric acid may be of value if it is sufficiently thorough, but this treatment is painful and usually is not applied effectively. The Pasteur treatment is the most effective method of preventing development of the disease in persons bitten by rabid animals.

**Somehow Relevant.**

"Bill has such a clean mind!"  
"I never saw a vacuum cleaner."—(Life).

We have an inquiry from a citizen who wants to know where the population of this country is the most dense. That's an easy one—from the neck up, brother.—(New York American).

A party of 300 American millionaires is to visit England this year. We understand there is a strict understanding among them that nobody is to buy the place without consulting the rest.—(The Passing Show).

The late W. L. George averred that he had analyzed women and cataloged them, and found sixty-five distinct species. He must have had acquaintance with just about sixty-five different women.—(Troy Record).

## County Society Reports.

### BURLINGTON COUNTY.

R. I. Downs, M.D., Reporter.

The regular meeting of the Burlington County Medical Society was held at St. Andrew's Parish House, Mt. Holly, June 9, 1:30 p. m., with Dr. Downs presiding and 24 members present.

Dr. Andrew M. Smith, of Mt. Holly, was elected to membership.

Dr. John C. Hirst, 2nd, of Philadelphia, read an interesting paper on the "Advances in Obstetrics During the Last Four Years", and Dr. Joseph Stokes, Jr., of Philadelphia, delivered an address on "New Problems in the Feeding of Infants". Both papers were thoroughly appreciated and their authors received the thanks of the Society.

### CUMBERLAND COUNTY.

E. S. Corson, M.D., Reporter.

The Cumberland County Medical Society was the guest of the Newcomb Hospital, Vineland, July 13. The Society was favored by the presence of Drs. Philip Marvel and H. O. Reik, of Atlantic City; J. Bennett Morrison and Frank W. Pinneo, Newark.

Dr. Pinneo addressed the Society on the subject of Group Life Insurance. The Society favorably received the proposition.

Dr. J. B. Morrison referred the Society to the communication of the Commissioner of Motor Vehicles anent the Medical Insignia. He said that but few members were availing themselves of the protection it gave to the profession; that no other insignia would be recognized by the traffic officers, and that, unless more availed themselves of it, the department would withdraw the insignia from use. All old insignias should be discarded. He also spoke of the Women's Auxiliary and emphasized the benefits that would accrue from it.

Dr. Edward J. Klopp, of Philadelphia, gave the address on the subject "Surgical Complications of Medical Conditions". Pneumonia is complicated by empyema. This condition may be readily overlooked. The mortality rate of pneumonia is greater in hospitals than at home owing to the frequent removal of the patients to the institution at the critical period of the disease. The simplest method for removing the fluid is always best. This is intercostal drainage. Aspirate before operating. Drainage should not be carried on too long. After aspirating a pure pneumococcus it will sometimes clear up at once. Parotitis sometimes follows pneumonia. Don't drain until you are sure you have pus, or a general septicemia may ensue. Joint complications are not common. Perforation is the most frequent complication of typhoid fever. Keen's monograph first emphasized this condition. Periostitis is also a sequel, especially of the pubic bone. Treat according to conditions; they are not all operative; pus is not always present.

Scarlet fever and measles have frequent nose and throat complications. If abdominal pain occurs at end of third or fourth week, think of appendicitis, but it may be nephritis.

Diphtheria may present symptoms of appendicitis. The best place to inject antitoxin is below costal margin. Joint complications may oc-

cur with marked destruction before being recognized. All structures may be involved in this form of arthritis, or the synovia and bursa only. Hysterical joint may be found mainly in the female, but the limb is always extended; pain on extension indicates infected joint. Don't think of it as rheumatism but bursitis and arthritis. There are 2 methods of treatment, either by cold or heat, according to benefit experienced. Eighteen days required to make a visible change. No harm can result from properly aspirating a joint. In Neisserian infection of joints use conservative treatment.

When pneumonia simulates appendicitis use morphin. It will relax the muscles. Appendicitis is 4 times as prevalent in summer owing to heat and moisture. Retrocolonic appendicitis is hard to differentiate.

The Society expressed unanimous appreciation of the excellent address.

A committee was appointed for the annual picnic to be held in September.

### MIDDLESEX COUNTY.

John H. Rowland, M.D., Reporter.

#### Rutgers Medical Club.

The annual outing of the club was held at Asbury Park, June 30. After enjoying the surf and the golf links, dinner was served at the Ross Fenton Farm. There were 20 members and 4 guests present; only 4 members absent.

### MONMOUTH COUNTY.

Daniel F. Featherston, M.D., Reporter.

The semi-annual meeting of the Monmouth County Medical Society took the form of a clam bake, served on the banks of the Manasquan river, June 30. The occasion brought out 50 members, which was the largest attendance of the year.

No business was transacted but the gathering had the pleasure of listening to a short talk by Dr. J. B. Morrison, Recording Secretary of the State Society, who explained 2 new insurance features that the state body have under consideration. The members of the county were very favorably impressed by the plans, judging from the general discussion brought forth.

### MORRIS COUNTY.

Marcus A. Curry, M.D., Reporter.

An event to which medical men made a large contribution of success and which rested on a hospital foundation, took place on the evening of June 24, 1926, at the Spring Brook Country Club in Morristown.

The medical profession had an active representation in Dr. Henry A. Cotton, Medical Director of the State Hospital at Trenton; Dr. David F. Weeks, Superintendent of the State Epileptic Village at Skillman; Dr. Samuel B. English, Superintendent of the State Tuberculosis Sanatorium at Glen Gardner; Dr. Augustus S. Knight of Gladstone, a member of the Board of Managers of the State Hospital at Greystone Park; Dr. James T. Wrightson, of Newark; Dr. Clifford Mills, of Morriston; Superintendent Dr. Curry, and Drs. Lane, McMurray, Collins, Lein, Gambill, Roche and



Donovan of the staff of the State Hospital at Greystone Park.

The occasion was a testimonial dinner to Warden Orlando M. Bowen of the State Hospital of Greystone Park, who resigned, after a service of 17 years, to accept the position of Superintendent of the Home for Respectable Bachelors which is being established at Maplewood, New Jersey.

Hon. Daniel S. Voorhees, President of the Board of Managers of the State Hospital at Greystone Park, opened the formal ceremonies with a touching review of the Warden's connection with the State Hospital and turned over the reins to State Comptroller N. A. K. Bugbee, who presided with much tact and grace.

The occasion was fraught with praise for the State Hospital at Greystone Park, which might be crystallized in the words of Dr. Samuel B. English who in his address said that the institution needed no praise, that it speaks for itself, as anyone could see by visiting the State Hospital at Greystone Park. Other speakers among the medical men present were Drs. Weeks, Cotton, Wrightson and Curry; the latter referring to the team work and loyalty he had enjoyed in association with Warden Bowen, during almost 17 years of his connection with the State Hospital at Greystone Park, first as Junior Physician, then as Senior Physician and since 1920 as Superintendent; that without the spirit of team-work and loyalty no institution can function properly. At the end of his address Superintendent Curry, in behalf of the retiring Warden's friends, presented him with a canvass bag containing \$300 in gold, and expressed the wish that each nugget would bring to the Warden golden memories.

Other State and county officials and institutional heads present were Samuel T. Atchley, Warden of the State Hospital at Trenton; Hon. James Baker of Jersey City, Commissioner of Institutions; William J. Ellis; Charles P. Messick, Chief Examiner and Secretary of the Civil Service Commission; Dr. Frank Moore, of the Rahway Reformatory; Hon. Walter D. Van Riper, of Newark; and representatives from throughout the State aggregating well upward of 200.

### OCEAN COUNTY.

G. W. Lawrence, M.D., Reporter.

The spring meeting of the Ocean County Medical Society was held at Toms River, July 7, at 8 p. m.

Preceding this meeting Dr. Frank Brouwer, of Toms River, entertained the members and invited guests with a very fine dinner at the Ocean House. The meeting was presided over by Dr. Frank Denniston, of Pt. Pleasant, President, with the following members in attendance: Theodore Thompson, V. M. Disbrow, Robert Buermann, H. B. Disbrow, E. C. Disbrow, Frank Brouwer, E. G. Herbener, Ralph Jones, and G. W. Lawrence.

Dr. Henry Davis, of Toms River, a member of Camden County; Dr. M. W. Newcomb, of Burlington County, Councilor of this District, and Dr. J. Bierach, Dr. G. W. MacMillan, and Dr. White of the Royal Mail S. S. Ohio, were present as guests.

After thanks being extended to Dr. Brouwer for his bountiful collation and response to the same being given by Dr. Brouwer, a very fine short address was given by Dr. Davis calling at-

tention to the respect and close relationship of all members of the medical profession and urging the utmost courtesy and respect to be given each other at all times.

The Minutes of the meeting of December 29, 1925, were read and approved. That being the annual meeting, the following officers were elected for the year 1926:

President, Frank Denniston, Pt. Pleasant; Vice-President, Irwin H. Hance, Lakewood; Secretary, Theodore Thompson, Lakewood; Treasurer, Frank Brouwer, Toms River.

The following applications were received: Drs. A. Goldstein, A. Towbin, and L. E. Stilwell, of Lakewood, and Drs. Woodward, R. F. Garrison, and J. Bierach, of Toms River. These names were referred to a committee for investigation and further report. The initiation fee was increased to five dollars.

The membership committee reported as follows: They had investigated applications and recommended that Dr. Goldstein and Dr. Tobin of Lakewood, and Dr. Bierach of Toms River be favorably considered. Dr. Woodward having died since the annual meeting his name was dropped, Dr. Garrison withdrawing his application was not considered, and Dr. Stilwell having been in the county a very short time was laid over for a time.

Upon recommendation of the committee, Drs. Goldstein, Towbin, and Bierach were elected to membership. Dr. MacMillan, of Lakewood, who formerly belonged to the society and who returned to Lakewood to resume practice, was reinstated to membership at this time. Dr. Davis, of Camden, being now a permanent resident of Toms River but wishing to transfer his membership from Camden County, from which he is a Permanent Delegate to the State Medical Society, was unanimously elected as an honorary member of the Ocean County Society without initiation or dues.

Dr. Newcomb, our Councilor, made a short speech urging better attendance at the State Medical Society, and calling special attention to the benefits derived from these meetings. He also called special attention to the indemnity insurance and the proposition which is now coming up in regard to the group insurance for members of the State Society. He also alluded to the desirability of each County Society having a board of censors and a motion was made and carried that the chair appoint three censors; one to serve 1 year, one to serve 2 years and one to serve 3 years, and that hereafter at each annual meeting one member shall be elected by the society to take the place of the one whose term expires at that time. The chair then appointed Dr. E. G. Herbener for 1 year, Dr. G. W. Lawrence for 2 years, both of Lakewood, and Dr. Frank Brouwer of Toms River for 3 years.

The meeting having consumed considerable time and the hour getting late it was adjourned without any discussion of matters of scientific interest.

### UNION COUNTY.

Russell A. Shirrefs, M.D., Reporter.

A largely attended regular meeting of the society was held on the evening of July 14 at the pleasantly located Echo Lake Club in Westfield. Among the guests present were Dr. J. B. Morrison, State Secretary; Dr. H. O. Reik, Journal Editor;

Dr. F. W. Pinneo, Secretary of the Essex County Society; and Mr. Lawrence, of the Union County Tuberculosis League, to all of whom President Laird extended a cordial welcome.

The regular order of business suspended, the chair called upon Dr. James S. Green, one of our own beloved "boys" who was recently honored by election to the Presidency of the State Society. Greeted by rounds of applause which testified to the high esteem in which he is held, Dr. Green modestly attributed his election not to his own merits, but as an honor extended to the Union County Society. He hoped during his term of office the local society would exert every effort to advance the interests of the medical profession by electing annual delegates not merely because they play good golf, but who would attend the State Convention and participate actively in its deliberations. An earnest attempt should be made to get every doctor in good standing on our membership roll. Our society meetings must be made so interesting clinically that every doctor will be eager to attend. Ample material and the high degree of ability of our members should easily insure this desideratum. As a society we should be prepared to render immediate medical and surgical aid when confronted by public disasters of large magnitude, such for instance as the terrible Lake Denmark explosion. The Society President might act as chairman of a committee for that purpose.

Dr. Morrison spoke briefly on the use of official state auto insignia for doctors, supplied for a fee of \$1 by Motor Vehicle Commissioner Dill. The latter requested that old emblems be abandoned and that the new plates marked "M.D." be used instead. New York and Pennsylvania now have a system of annual registration for physicians. The fees thus obtained amount in the aggregate to large sums, which have been used in the successful prosecution of irregular practitioners. Sandwiched in between these states, New Jersey (without a similar registration system) may prove a happy hunting ground for quacks who have fled for safety from our sister commonwealths. In spite of our inadequate means, however, there were 129 convictions of irregular practitioners in New Jersey during the year. The formation of a Women's Auxillary to the County Society would be desirable, working along the lines of educating the public and in disseminating matters of public medical interest. They have proved of much benefit in the counties where they operate, and our wives should be helped and encouraged to form such an organization.

Dr. Reik spoke interestingly of the Atlantic City meeting and complimented us for having the largest percentage of members in attendance of any county except Atlantic, which was right at home. It is planned to continue the radio health campaign which has been so well received by press and public; and speakers will gladly be provided on request to address lay organizations of either men or women. Moving pictures are being prepared showing the desirable method of making a complete physical examination.

Dr. Pinneo explained in detail the contemplated plan to offer the profession group insurance covering life, accident and health, at much more favorable rates than could be obtained individually. After discussion, a motion was carried to endorse the plan in principle, and the society pledged itself to render aid in effecting its consummation.

Mr. Lawrence exhibited an instructive new 5 reel motion picture on tuberculosis. It was prepared under the auspices of the A. M. A., and among other things enabled one to see in 3 minutes the progressive ravages of a pulmonary disease as it had developed during a 9 months illness. The picture was one of merit and high educational value.

A nominating committee consisting of Drs. Schlichter, Lufburrow and Quinn was appointed to suggest a slate for our next annual meeting.

Drs. Frances H. Arthur of Elizabeth and Carl Bishop of Plainfield were unanimously elected to membership; and the names of Drs. Gibbs, De-Casesar and Yuckman were proposed for future ballot.

The afternoon was enjoyably spent by a large number of fans on the splendid golf course. Drs. Lerman and Hanrahan were victors with low scores of 73; Dr. Savoye was next with 78; while Drs. Warncke and Williams each tallied 84. A host of others, being temporarily off their form, were less fortunate. At the close of day, many sat down to a good dinner in the attractive club dining room, where the needs of the inner man were amply served. Thanks were given to Dr. R. G. Savoye, through whose courtesy the hospitality of the club was extended to us.

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## In Lighter Vein

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### Traffic Note.

"I have a terrible rumbling on my stomach. It's like a wagon going over a bridge."

"It's most likely that truck that you ate this morning for breakfast."—(Oregon Orange Owl).

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### They'd Taken the Same Course.

Grace—"How did you get along with your French in Paris?"

Viola—"Wonderful! I found two women from Denver who could understand me!"—(Life).

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### Old Stuff.

"Aren't you nearly ready, dear?"

"I wish you wouldn't keep asking that question, Clarence. I've been telling you for the last hour that I'll be ready in a minute."—(Good Hardware.)

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### Prophetic Bridget.

A medical authority recommends the eating of semi-raw potatoes. Our cook has insisted on this for years.—(The Passing Show).

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It usually takes five years for a tree to produce nuts, but this isn't true of a family tree.—(Detroit Free Press).

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The scientist who found that diamonds ground to powder give off a repugnant odor will probably admit that boiling a cabbage is cheaper.—(Detroit News).

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Henry Ford is buying up old violins and if he wants to make himself really popular in some neighborhoods he will reach out for the ukuleles and saxophones.—(Portland Oregonian).



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## WHAT IS WRONG WITH OUR WORK- MEN'S COMPENSATION LAWS AND WHAT WE CAN DO TO CORRECT THEM.

ANDREW F. MCBRIDE, M.D.,  
Commissioner of Labor, Trenton, N. J.

(At a meeting of the officers of the State Medical Societies of the states of New York, New Jersey and Pennsylvania, held at the County Medical Society Building, Philadelphia, Monday, June 21, 1926, Dr. McBride presented the Workmen's Compensation Law as administered in New Jersey and opened a formal discussion on the subject.)

As an aid to intelligent discussion of one of the subjects of our conference this afternoon, viz.,—"What Is Wrong With Our Workmen's Compensation Laws and What We Can Do To Correct Them"—the first step should be, I take it, to trace in a general way the history of the operation of the law in practice in our respective states and to indicate some of the changes that have been made through subsequent legislation, especially such provisions of the act as are of special interest and concern to us as members of the medical profession.

The New Jersey Workmen's Compensation Act of 1919 was the outgrowth of an investigation made by the state "Commission to Investigate into the Question of Employers' Liability", approved pursuant to the legislative resolution of 1910. The bill recommended by this commission was passed by the legislature and was approved by the then Governor,

Woodrow Wilson, April 4, 1911. The law went into operation July 4, 1911, the first state elective compensation act in America to become and to remain effective. Suit was instituted almost immediately to test the constitutionality of the law, which, after going through all the lower courts, resulted in a decision by the New Jersey Court of Errors and Appeals upholding the act in July 1914, in the case *Sexton vs. Newark District Telegraph Company*.

During the first 3 years of its operation the law was amended in several particulars but stood, in its main provisions, practically as originally enacted. It still is elective as to private employers; as to the state and its counties, municipalities or other governing bodies or boards it is compulsory, except with regard to employees receiving more than \$1200 a year or holding elective offices. Election to come under the act is presumed, as to both parties, in the absence of written notice to the other or express statement to contrary in contract of hire, and such election to accept may, on the other hand, be changed (1) by 60 days' notice in writing from either party to the other, or (2) at any time by express agreement. The defenses of assumption of risks, fellow servant's fault and contributory negligence (except wilful) are abrogated for all employers, the grounds of liability to employees of contractors extended and the burden of proof of wilful negligence shifted upon the employer. Employers coming under the act are to pay the compensation prescribed therein; employers not coming under the act are still liable to suits for unlimited damages. All pri-

vate employments except casual labor are covered, including domestic service and farm labor—the only state act to include the last 2 occupational groups. The injuries entitling to compensation are personal injuries or death by accident arising out of and in the course of employment, except when intentionally self-inflicted.

The scale of compensation provided for, during the first few years of its operation, was one of the lowest in the country. No compensation was allowed for the first 2 weeks after the injury. Medical and surgical aid was limited to the first 2 weeks and to \$50. For the dependents of workmen killed, it provided from 35% of the weekly wage for 1 dependent, to 60% for 6 dependents; with a minimum of \$5 and a maximum of \$10 a week except that if the total wage was less than \$5 full wages were to be paid, for a period of 300 weeks. For temporary disability it allowed 50% of the weekly wage during the period of disability, not to exceed 300 weeks, except in the case of permanent total disability when the compensation was payable for 400 weeks; here also the minimum and maximum limits of \$5 and \$10, respectively, applied, except that if the total wage at the time of injury was less than \$5, only the total was to be paid. If death resulted from an accident, the expense of the last sickness and burial were to be paid whether or not there were dependents, the burial expense being limited, however, to not more than \$100. Nonresident alien dependents, were excluded from benefits. No insurance or other security for payment of claims was required.

Contrary to the practice of the majority of compensation states, New Jersey created no machinery for the administration of her Workmen's Compensation Act. The "Employers' Liability Commission" established by the law was in no sense administrative, its powers being limited to observing the operation of the act, to issuing annual reports, and to recommending to the legislature any changes which might, upon experience, be found advisable. The law provided the rules in accordance with which settlement was supposed to be made between the employer and employee. The state was brought into the matter by a petition

of the County Court of Common Pleas, for a hearing (1) because of non-agreement, or (2) because of non-payment, or (3) upon a petition for commutation of the claim for a lump sum. Somewhat more than half of the cases were brought into court for the last named purpose. The Court was required to hear such witnesses as were presented and "in a summary manner" decide the merits of the controversy.

During the first 3 years of operation of the law, the number of cases reported were 6271 in 1912; 6617 in 1913, and 6513 in 1914. In 1912 the court cases formed only 6%, in 1913 they formed 6.8% and in 1914 they formed only 6.6% of all the compensation cases. Of the 428 court records on file for the year 1914, claimants counsel fees ranging from \$5 to \$300 were mentioned as having been paid in 173 cases; the most common fee was \$75, while the average was \$59.

As the result of observation of the operation of the act and in an effort to keep abreast with the changed industrial conditions and the advanced trend in labor legislation, many radical changes both in procedure and in compensation schedules have been effected since enactment of the original act.

Surveys made by the Employers' Liability Commission disclosed so many inadequate settlements that the creation of a supervisory body to administer the law was imperative, and the Workmen's Compensation Aid Bureau was created in 1916, to bring about adjustments under the law. Two years' experience, however, demonstrated that a bureau without judiciary powers could not effectively accomplish the desired results, so in 1918 the present Workmen's Compensation Bureau was created, in the Department of Labor, and is composed of the Commissioner of Labor, as Chairman thereof and Commissioner of Compensation, 3 Deputy Commissioners of Compensation, one of whom also acts as its Secretary, and such referees and other employees as may, in the judgment of the Commissioner of Labor, be necessary.

The Commissioner of Labor, the Deputy Commissioners and the Referees appointed under the act, sitting, either individually or together, have exclusive original jurisdiction of



all claims for compensation, have the same power as the Court of Common Pleas to issue subpoenas; to compel the attendance of witnesses, the production of books and papers; and the judiciary authority to render decisions. Either party may appeal from the judgment of the Commissioner or Referee to the Court of Common Pleas of the County in which the hearing was held. From 1918 to 1921, a trial de nova was permitted during such appeals but proved so unsatisfactory that since then, in considering such appeals, the courts can not admit any new evidence, the trial of such appeals being based exclusively on the transcript of the record and testimony as certified to by the Workmen's Compensation Bureau.

During the past 6 or 7 years there have been many gratifying efforts to liberalize the law and to bring it abreast of the best standards of other states. In 1919 the maximum compensation was raised from \$10 to \$12 and the minimum from \$5 to \$6; the compensation rate being raised from 50% of weekly wages to 66.7%, subject, of course, to the \$12 maximum. Another important advance, effective that year, was the extending of the period during which the employer and the insurance carrier must furnish medical aid to the injured from 2 weeks to 4 weeks; and the waiting period during which no compensation other than medical aid shall accrue and be payable, was reduced to 10 days.

During the past 5 years no less than 11 separate acts have been enacted for the purpose of increasing the benefits payable under the operation of the compensation law and for the further strengthening of the act and the insuring of the amounts payable thereunder. So that, at the present time the weekly maximum is \$17 and the minimum \$8; payable, in fatal cases, to dependents for a period of 300 weeks and to children until they shall have reached the age of 16 years; in temporary disability cases, a maximum period of 300 weeks is necessary; and in permanent total disability cases for a period of 400 weeks, except that an employee undergoing rehabilitation is to receive compensation beyond such period during disability, at a rate reduced in proportion to earning capacity. For permanent partial disabilities, an additional compensation is

payable, based upon the extent of permanent disability.

The order of compensation payment is clearly set forth in the act; compensation for temporary total disability following the waiting period; after which payments are to be made "consecutively for each permanent injury", if such exists. Thus, if an employee were to suffer total disability for 6 months, and various injuries to the fingers, producing permanent partial disability, separate award is made for the term of temporary total disability, followed by specific awards for the permanent injuries to the fingers.

The waiting period has been reduced, effective January 1, 1926, from 10 days to 7 days, but if disability extends beyond 7 weeks, compensation is at once payable for waiting period.

Alien dependents are included among the beneficiaries under the compensation act.

The allowance for burial expenses in fatal cases has been increased to \$150.

The employer must furnish such medical, surgical and other treatment and hospital service as shall, in the opinion of the Bureau, be necessary to cure and relieve the workman of the effect of injury and restore the function of injured members or organs, where restoration is possible.

The Commissioner of Labor and the Deputy Commissioners of Compensation may fix a reasonable fee for medical witnesses in compensation cases.

Mutual associations and stock companies writing compensation or employers' liability insurance, and also self-insurers, are assessed under an act of 1913, a sum equal to 1% of the total compensation paid out each year by such mutual association, stock company or self-insurer. This fund is for the benefit of the Rehabilitation Commission and also to create a fund from which to complete compensation payments to persons totally disabled as a result of 2 separate accidents.

And lastly, the contraction, after July 4, 1924, of any of the following occupational diseases: anthrax, lead poisoning, mercury poisoning, arsenic poisoning, phosphorus poisoning, wood alcohol poisoning, benzene poi-

soning, chrome poisoning, caisson disease, and mesothorium or radium necrosis, as the result of exposure during employment, causing a disability commencing within 5 months after the termination of such exposure, entitles the employee to the benefits of our Compensation Act, provided due notice be given to the employer or he have actual knowledge of this disability within the above specified 5 months.

During the last fiscal year there was a total of \$5,029,686 awarded as compensation in the 232 fatal and 19,065 non-fatal compensation cases approved by our Bureau. 9456 cases were referred to our 3 Deputy Commissioners of Compensation, 2 Referees and 3 Acting Referees for informal hearing, 171 of which were fatal cases; as the result of which reference 19,291 hearings were held, awards being made in 7994 instances and 1579 cases dismissed.

Of formal petitions filed, there were 302 cases closed by agreement, 289 were closed after formal hearing and award, 132 were closed by dismissal after formal hearing, 45 were withdrawn, and 187 cases were not moved by counsel for the petitioners.

One of the most important administrative problems confronting the Workmen's Compensation Bureau is the constantly increasing number of petitions filed for commutation of future compensation payments. According to our act, as amended in 1919, the compensation provided may be commuted by the Compensation Bureau at its present value, when discounted at 5% simple interest, upon application of either party, with due notice to the other, if it appears that such commutation will be for the best interest of the employee or for the dependents of the deceased employee, or that it will avoid undue expense or undue hardship to either party, or that such employee or dependent has removed or is about to remove from the United States, or that the employer has sold or otherwise disposed of the greater part of his business or assets.

In determining whether the commutation asked for will be for the best interest of the employee or the dependents of the deceased employee, or that it will avoid undue expense or undue hardship to either party, the Workmen's Compensation Bureau, or the judge of

the Court of Common Pleas constantly bears in mind that it is the intention of the law that compensation payments be in lieu of wages, and are to be received by the injured employee or his dependents in the same manner in which wages are ordinarily paid. Commutation, therefore, is a departure from the normal method, and is allowed only when it clearly appears that some unusual circumstances warrant such a departure. Commutation can not be allowed for the purpose of enabling the injured employee or the dependents of a deceased employee to satisfy a debt or to make payments to physicians, lawyers or other persons.

During the last fiscal year commutation was made in 49 cases, mainly for the purpose of enabling the injured or dependents to return to some foreign country, purchase a home, pay off a mortgage, or to engage in business. Partial commutation has been authorized in 55 cases and in a few instances the weekly rate has been increased with corresponding reduction in the number of payments, having due consideration for the discount allowed by law. All such applications are very carefully investigated in every detail by our vocational examiners before being considered and passed upon by a special board, comprising the 3 Deputy Commissioners of Compensation, and myself, as Commissioner of Compensation, which sits each week for that purpose.

According to Chapter 178, P. L. 1917, as amended in 1921, any employer, who by agreement expressed or implied, is now, or may hereafter become, subject to the provisions of Section 2 of the Workmen's Compensation Law, who shall fail to make sufficient provision for the complete payment of any obligation which he may incur to any injured employee, or his dependents, shall be liable to a fine of \$200 and all costs of suit, recoverable by the Commissioner of Banking and Insurance, in an action of debt, in the name of the State of New Jersey. Employers of farm labor and domestic servants are exempt from the provisions of this act.

There is, as you know, no State Insurance Fund System in force in our state. Insurance against liability for workmen's compensation may be placed with a stock company or a mutual association, under the supervision and



control of the Department of Banking and Insurance; or an employer may carry his own risk, provided he can reasonably satisfy the Commissioner of Banking and Insurance as to the permanency and financial standing of his business.

There is, moreover, this safeguard in the policies placed with stock companies and mutual associations: "Every such contract shall provide, or be construed to provide, that upon the death, insolvency or bankruptcy of the insured employer, or upon his assignment for the benefit of creditors, the insurance carrier shall immediately become directly liable for all compensation payments due to any injured employee or his dependents by virtue of prior agreement or award until completion thereof, or that may hereafter become due during the period for which the requisite premiums have been paid by such employer."

In the case of the 400 self-insurers, we have been informed by the Department of Banking and Insurance that no injured employee or dependent has ever lost a single dollar because of insolvency of those granted the self-insurance privilege in this state. On account of the practically universal coverage of the Compensation Act, the difficulty of compelling a large number of employers, who employ 1, 2, 3 or 4 persons, to take out workmen's compensation insurance is manifest. Therefore, despite the provisions of the Compulsory Insurance Law, we have found, unfortunately, numerous cases among the class of smaller employers, where much to the dismay of the injured or their dependents no monetary redress was available on account of the employer's failure to insure his workmen's compensation risk.

In the hope of remedying this deplorable condition through the imposition of a more severe penalty, the legislature, in 1924, amended the Compulsory Insurance Act to provide a fine of not more than \$500 for a first offense and for a fine of not more than \$500 or imprisonment for a subsequent offense. Any contractor placing work with a subcontractor, shall, in the event of the contractor's failure to carry workmen's compensation insurance, become liable for any compensation which may be due an employee or the dependents of a deceased employee of said subcontractor.

As a member and the Director of the State Rehabilitation Commission, I have, through the operation of clinics in Jersey City, Newark, Trenton, Paterson, Camden and Atlantic City, in departmental buildings housing branches of our Workmen's Compensation and Employment Service, endeavored to bring about the closest possible coöperation of their activities by providing the machinery for: (1) placing the worker in the best possible physical condition; (2) furnishing him with the compensation contemplated under the law; and (3) obtaining for him as good a position as his capabilities will permit.

Of the cases under treatment of the Rehabilitation Commission during the past year, 421 were referred directly from the Compensation Bureau as requiring further care. The most important activity in which the rehabilitation clinics coöperate with the Compensation Bureau is the examination of the injured worker. This examination is conducted for 2 purposes, first to see if further treatment is required, and second to determine the extent of permanent disability. A complete physical examination is made of all cases but special reference is made to the afflicted part. The medical personnel concern themselves chiefly with the orthopedic and surgical conditions; eye, ear, head and neurologic conditions are referred to the specialists of our consulting staff. The questions which our medical personnel have to decide are: Whether the man is able to return to work; if he requires further treatment, and what kind of treatment; in amputation cases, can he wear an artificial limb, the type of artificial limb essential and does he require any treatment before application of the prosthetic appliance. In cases where consultations are required, our consulting staff give freely of their time.

On the question of the estimation of permanent disability, we have been deeply concerned. For a long time there has been too much guess work on the part of the general medical profession in appraising the ultimate results of injury as it effects the individual handicap. It has been our purpose to study the question and to provide a method of evaluation that would be both practical and accurate. To that end we have devoted much time in de-

veloping a rational method of procedure and endeavoring to enlighten the public and medical profession as to the advantages of such a procedure. It has been our experience that the differences of medical opinion have been for the most part honest and sincere. The difficulty has been that no common standard or knowledge was available. The result of instituting this method of estimating permanent disability will be to give greater justice to both the injured worker and the employer.

There are 3 sections of our Compensation Act of specific importance to the members of the medical profession, as follows: •

"Section 14. Medical and Hospital Service. The employer shall furnish to the injured workmen such medical, surgical and other treatment, and hospital service as shall be necessary to cure and relieve the workman of the effects of the injury and to restore the functions of the injured member or organ where such restoration is possible; provided, however, that the employer shall not be liable to furnish or pay for physicians' or surgeons' services in excess of \$50 and in addition to furnish hospital service when necessary in excess of \$50 unless the injured workman or the physician who treats him, or any other person on his behalf, shall file a petition with the Workmen's Compensation Bureau stating the need for such physician's or surgeon's services in excess of \$50, as aforesaid, and such hospital service or appliances in excess of \$50 as aforesaid, and the Workmen's Compensation Bureau after investigating the need of the same and giving the employer an opportunity to be heard, shall determine that such physician's and surgeon's treatment and hospital services are or were necessary, and that the fees for the same are reasonable and shall make an order requiring the employer to pay for or furnish the same."

"Fees and Charges Allowable. All fees and other charges for such physicians' and surgeons' treatment and hospital services shall be reasonable and based upon the usual fees and charges as prevailing in the same community for similar physicians', surgeons' and hospital services."

"Section 17. Examination of Employee as to Physical Condition. After an injury, the

employee, if so requested by his employer, must submit himself for examination at some reasonable time and place within the state, and as often as may be reasonably requested, to a physician or physicians authorized to practice under the laws of the state. If the employee requests, he shall be entitled to have a physician or physicians of his own selection present to participate in such examination. The refusal of the employee to submit to such examination shall deprive him of the right to compensation during the continuance of such refusal. When a right to compensation is thus suspended no compensation shall be payable in respect of the period of suspension."

"Section 20. Employer Prejudiced. Whenever it shall appear that an employer is being prejudiced by virtue of the refusal of an injured employee to accept proffered medical and surgical treatment deemed necessary by the physician selected by the employer, or his failure or neglect to comply with the instructions of the physician in charge of the case, such employer is hereby authorized to file a petition with the Workmen's Compensation Bureau, which is hereby empowered to order proper medical and surgical treatment at the expense of the employer and in event of refusal or neglect by the employee to comply with this order the Bureau shall make modification in the award contained in the schedule as the evidence produced shall justify."

Of special importance in connection with the enforcement of the above quoted sections of our Compensation Law is the following recent decision of one of our Deputy Commissioners in the case of a petition filed with our Bureau by a certain physician of our state.

NEW JERSEY DEPARTMENT OF LABOR  
WORKMEN'S COMPENSATION BUREAU.

James H. Rosecrans,	} On Petition for Compensation Determination of Facts and Dismissal Claim Petition No. 483
Petitioner.	
vs.	
Robert Reiner, Inc., a	
Corp., and the	
Fidelity & Casualty Co.,	}
a Corp.,	
Respondents.	

A petition having been filed in the above stated matter, praying for the compensa-



tion to which the petitioner may be entitled by virtue of the forms and provisions of an act of the legislature of the state of New Jersey entitled "An Act prescribing the liability of an employer to make compensation for injuries received by the employee in the course of the employment, establishing an elective schedule of compensation and regulating procedure for the determination of liability and compensation thereunder" approved April 4, 1911, together with the several supplements thereto and acts amendatory thereof, and a time and place for the hearing of petition having been fixed, and it appearing to the Deputy Commissioner that said petition, and the order fixing the time and place of said hearing have been duly served upon the respondent, and the petitioner and the respondent having appeared on the twenty-third day of April, 1926, the date set for the summary hearing herein, the petitioner being represented by Lichtenstein, Schwartz & Freidenberg, and the respondent by Edwards & Smith, and the Deputy Commissioner having heard the testimony offered in behalf of the petitioner and the respondent does find and determine from the evidence as follows:

The facts in this case were stipulated and agreed upon, which briefly are as follows:

Dr. James H. Rosecrans, petitioner, was engaged by respondent, Robert Reiner, Inc., to treat medically one Richard Spoerl who suffered an accident arising out of and in the course of his employment. Dr. Rosecrans rendered services and demanded from respondent payment of his bill, which amounted to \$710. The respondent insurance carrier, Fidelity & Casualty Company, was aware of the fact that petitioner was treating said Richard Spoerl. Petitioner not being paid his bill for medical services, instituted proceedings in this bureau by means of a petition for the payment of services rendered. The respondents in this proceeding put in the defense that the Workmen's Compensation Bureau is without jurisdiction to hear this case on the ground that it involves merely a contractual relationship between petitioner and respondent, and that petitioner's remedy is in the Common Law Court. Therefore, the question of jurisdiction is the only one at issue.

Petitioner bases his contention on the fact that this Bureau has jurisdiction of paragraph 14 of the laws of 1911, chapter 95 as amended by chapter 245, laws of 1922, wherein it states, "The employer shall not be liable to furnish or pay for physicians' or surgeons' services in excess of \$50 and in addition to furnish hospital services in excess of \$50 unless the injured workman or *physician* who treats him, or any other person on his behalf shall file a petition

with the Workmen's Compensation Bureau stating the need for such physician's or surgeon's services in excess of \$50".

In my opinion, considering the above quotation in conjunction with the remaining section of the paragraph, which deals with medical services, this petition is filed for the sole purpose of enlarging the obligation of the employer to furnish medical treatment; and that the petition when filed by the physician is merely filed in behalf of the injured workman. The filing of this petition for an extension of the medical services in no wise affects the contractual relations between the various parties. It creates no new rights but merely enlarges the employer's obligation, granting the injured person the benefits of extended medical service.

A careful reading of the case of *Moore vs. Deres* reported in 97 N. J. L. 378 and 117 Atl. 480, and the case of *Dias vs. New Jersey Manufacturers Casualty Insurance Company* reported in 132 Atl. 101, makes plain that the various provisions of the Workmen's Compensation Act are applicable only to the parties incident to the contract of employment; namely, employer and employee, and it is clear from the above citations that a third person has not rights enforceable under the provisions of the Workmen's Compensation Law.

My interpretation of section 14 of the Compensation Act which deals with medical services is as follows: When the employer fails to render medical services in accordance with the provisions of the Compensation Act, and the injured workman secures the services of a physician, then the injured workman has a right to file a petition with the Workmen's Compensation Bureau for reimbursement for obligations incurred in securing this medical service, as set forth clearly in the case of *Moore vs. Deres*, "The Provision for enforcement in the name of employee clearly negatives any right to enforcement in the name of a creditor of the employee as is the present case. The employee must bring the suit even though he may be under a moral obligation to spend the money recovered for the purpose for which the statute provides it".

When, however, the employer renders the medical service by means of a physician employed by him, then the right of action that the physician may have for his services is in the Common Law Court, against the employer, but not in the Workmen's Compensation Bureau, as clearly stated in the case of *Dias vs. New Jersey Manufacturers' Casualty Insurance Company* as follows: "The parties are bound by all the terms of the statute, and only parties to the statutory contract are bound by its terms or entitled to its benefits. An examination of

the statutes demonstrates that only the employer and the employee are parties to the statutory contract. The act of 1911 implies a contract only as between employer and employee, and makes provision quite inapplicable to third parties."

A study of the Workmen's Compensation Act fails to reveal any provision under which an action may be maintained on the part of any other than the injured employee or his dependents. In the absence therefore of any provisions for legal procedure by some other person, such right can not be assumed.

I do therefore find that the Workmen's Compensation Bureau is without jurisdiction to hear this case, and do render judgment in favor of the respondent and against the petitioner, and order that the petition be dismissed.

Charles E. Corbin,

Deputy Commissioner.

Dated: May 19, 1926.

There are, of course, certain improvements that could be made in our Workmen's Compensation Act, improvements, perhaps, in both the letter of the law and its administration, and our legislators and the employers and representatives of labor in our state have always shown a very commendable disposition mutually to agree upon the necessary legislation needed whenever certain defects in the act or needed improvements therein have been fairly pointed out, and, I might add, in conclusion, that perhaps the greatest aid to a satisfactory carrying out of the provisions of our Workmen's Compensation Law has been the intelligent coöperation those responsible for its administration have received from the members of the medical profession of our state.

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### CACOETHES SCRIBENDI.

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A cursory perusal of the current index of medical literature might lead one to infer that what Oliver Wendell Holmes has termed the *cacoethes scribendi* was universal—and yet there are countless men whose years in the practical school of experience bring no benefit to any but themselves.

It is an interesting speculation as to the

outcome of requiring from every physician one scientific report a year to be presented for the general perusal of his fellows—interesting in the by-paths into which it leads: the subject chosen; the manner and thoroughness of its presentation; the ideas aroused in association; and, the direct and indirect effect upon its author and his audience.

It may be safely said that there are few better methods of becoming acquainted with a subject than to attempt to write about it, for the necessary marshalling of one's thoughts, the associated deductive and inferential reasoning and collateral reading and study required to elaborate or construct scientific hypotheses or to report the sequels, concomitants, or aftermath of disease, or to justify methods of treatment and make evident theological pathways leading to diagnosis are all inevitably bound to disclose unexpected and sometimes astounding gaps in knowledge and understanding, as well as lead to their repair.

A certain meandering is permissible to the unaccustomed *extempore* speaker, but from the writer one demands a crystallization of ideas and a clarity of thought if not the ease of expression which comes with practice.

It is not given to many to produce a volume or even an extensive and inclusive monograph, but it is denied to none to benefit by experience and to pass on the lesson to others.

Society discussions and even casual conversations often indicate an underlying vein of information, the fruit of correlated observations and experience, worthy of more careful development in print, but the papers are never forthcoming.

The reasons are often illuminating and interesting: Many "have not the time" and yet tomes have been written in the interval between, as it were; indeed, the most masterly volumes come from the busiest men the very extent and volume of whose practice and activities make their experience and ripened, retrospective judgment worth recording. Others never write because "the journals are only open to the selected few", behind which one visions the rejected manuscript. The editor never lived who found it possible to publish all the papers submitted, the fault resting mainly with the author.



Is the subject of interest to the readers of that journal? Manifestly a paper on neurology is ill suited to a journal devoted to dermatologic subjects; herein lies the reason for some rejections.

Is the paper well written; the ideas clearly expressed? "Fine writing" is no essential, indeed, such attempts are better avoided, but logical progression and clarity of thought are very desirable.

Has the journal recently published similar material? Further contributions unless conveying new information are neither timely nor apt to displace other and new subjects.

Does the paper really embody new or original ideas or is it merely a rehash of old and previously published concepts; was it brought forth from experience or excavated from the library? All these are more potent and frequent causes of rejected manuscripts than the assumed personal animus of the editor.

And where is the author whose manuscripts never returned to his desk? A rejected paper should lead to a better paper, at least to a consideration of its possible imperfections, for the perfect, impeccable, and irreproachable paper has yet to be written.

As to subjects—no man endeavoring to practice honest, careful, and true scientific medicine need ever lack for them, for the problems confronting him are always of interest to his follows, especially when they are solved. Even an honest confession of mistakes—though seldom the matter of the printed page—and a thoughtful consideration of their cause extends the knowledge of others and may prevent their repetition. Nor should one disregard the "lowly case report", for medicine is only the accumulated and correlated data resulting from the study of a multitude of single cases.

An oft-heard excuse is that "I don't know how to write; I have no facility of expression". It is told of a young poet that, transmitting his verses to an older craftsman, he added exultantly that they were easily and rapidly written. To which the elder answered that he hoped to teach him to write with difficulty.

Procrastination never put a comma into print; the way to begin is to begin. If some write

never and others seldom, the criticism is sometimes heard that another writes too much. The important thing is: Does he say anything and is it worth saying? After that, is it well said? At all events, his interest is awake and his own knowledge increases with every paper and so his contributions should increase in interest and value. In the background there is always the editor to curb his impetuosity if it be ill-advised or really mere verbosity.

To write and thereby to acquire, as well as, perhaps, to impart information is worth attempting at any rate; if no one is the wiser but the scribbler, the time is not altogether wasted.

The contest is free and open to all and the rules simple:

- (1) Have something to say.
- (2) Say it.
- (3) Stop.

After all, there are worse afflictions than the cacoethes scribendi.

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## TREATMENT OF PERNICIOUS ANEMIA.

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Any attempt to attack the problem of pernicious anemia is excusable by the widespread prevalence of the disease and its reputed hopelessness. The investigation which has been conducted for over a year in the Physiatrie Institute, with the collaboration of Dr. Leslie J. Witts and others, and which is still in progress, has consisted partly in animal experimentation concerning certain theoretic aspects, and a clinical trial of certain metabolic concepts in practical treatment. The disease is chronic and extremely variable in its spontaneous course. Hence there is the inevitable dilemma that if our methods are not explained we shall be asked why we use a secret treatment, while if the treatment is published before its value is demonstrated we are exposed to the danger of failure and the charge of making premature and unfounded proposals. It seems preferable to face this latter danger,

and to announce our observations to date as a record of endeavor but not yet of proof.

The metabolic principles referred to are those found to hold good for diabetes, nephritis and hypertension, all of which formerly ranked as progressive fatal diseases. The new and more accurate conception distinguishes 2 factors; first, an infection which damages certain vital organs; second, functional overstrain of the damaged organ which causes its progressive deterioration. Thus, in diabetes, the pancreas has been damaged, but, in absence of further toxic injury, the only continued impairment of the islands of Langerhans is in the form of hydropic degeneration, which is due solely to functional overstrain. The tradition of the progressiveness of diabetes was so deep-rooted that when I ventured 10 years ago to contradict it, on the basis of combined clinical and pathologic evidence, I encountered disbelief in the Rockefeller Institute where the work was done, and practically everywhere else. The use of insulin, however, has convinced most physicians that diabetes is not progressive when functional overstrain is relieved. Nephritis and hypertension are still ranked in textbooks as diseases running a predestined course, and this ancient belief is also an error. Granting that the original infectious cause is removed and that the functional overstrain is actually relieved by diet, typical cases of nephritis and hypertension are held in check indefinitely and tend to show improvement rather than aggravation. After 6 years of clinical experience we are prepared to meet any challenges concerning the efficacy of accurate salt restriction for hypertension. The control of nephritis by restriction of salt and protein is demonstrable not only clinically but also by animal experiments, in which we have produced not only the clinical symptoms and progressiveness but also typical pathologic lesions in the kidneys by functional overstrain. In this way the renal-vascular diseases are placed on a par with diabetes and the hydropic degeneration of islands.

A few special points under this conception may be further emphasized. One reason for failure of a treatment may be that the primary infectious cause is not found or successfully removed. Another reason may lie in

failure to relieve functional overstrain, either because of inefficient methods or because the organic damage is already so severe that even the minimum function constitutes overstrain. The functional treatment is a symptomatic treatment, but the purpose in relieving symptoms is not merely comfort but an effect upon the fundamental nature and progressiveness of the disease. The symptomatic improvement may be useless or harmful if it is accomplished by wrong methods. Thus, viewing diabetes as a progressive and emaciating disease, physicians formerly tried to build up their patients in weight and strength by excessive diets and thus broke down tolerance so as to hasten both emaciation and death. To allow salt in the diet of an edema patient, and then undertake to drive out the edema by diuretics, is a method of injurious overstrain, and is widely different prognostically from the relief of edema by functional rest through simple exclusion of salt. Reduction of hypertension by vasodilator drugs or by the artificial mechanical method of bodily rest is probably useless as regards arresting progressiveness, as long as the injurious chemical effects of a wrong diet are allowed to continue.

The question which we have raised but not yet settled is whether these principles have any application to the treatment of anemia. If anemia can be brought into this group of diseases, its treatment can be outlined under 3 general heads.

(1) *Removal of infection.*—It is highly improbable that pernicious anemia is an infection with a plasmodium or other unknown specific blood parasite. There is better reason to believe that it is due to ordinary bacteria, often located in chronic foci. Our observations have tended to confirm Hunter's theory of the preëminent etiologic importance of diseased teeth, and the organism which we hold chiefly under suspicion is the hemolytic streptococcus. Sinus infections have seemed to stand second in importance in our series. In a few cases a question has arisen regarding the gall-bladder, but we have as yet no sufficient experience for testing the claim of certain authors that this is a nidus of streptococci in pernicious anemia. We have no particular dispute with other writers who seek to in-



criminate other organisms or refer the site of infection to the intestine or elsewhere. The general principle is only that the source of intoxication should be found and removed if possible. Failure to locate or to clear up the true source may be a cause of failure of treatment. Attempts in this direction should be pushed to the utmost, before we submit to the old doctrine of hopeless progressiveness in any case. Our observations of the benefits of the removal of infected teeth have caused us to go to an extreme in this direction. Not only those with abscesses revealed radiographically, but also all dead teeth and those showing the slightest pyorrhea, erosion or absorption have been extracted. The apparent differences to date in favor of patients who are entirely toothless, as compared with those who have been allowed to retain supposedly sound teeth, have even raised the question whether we should insist on the removal of all teeth in pernicious anemia regardless of their condition. The pulling of 2 to 4 teeth at a time may cause some temporary disturbance, but this has never proved serious in any of our cases and has apparently been well repaid by the later results.

(2) *Avoidance of over-stimulation of damaged organs.*—As soon as they recognize a severe anemia or especially the "pernicious" characteristics in the cell count, physicians are impelled by their conception of a progressive fatal disease to make frenzied attempts to restore the blood by means of transfusions or arsenic. Transfusions do not relieve the blood-forming organs unless very transitorily, and it is agreed that any prolonged increase of cell count resulting from them is due to stimulation of the bone marrow. Arsenic was formerly given as a bone marrow stimulant, but a recent theory credits it with blocking the action of a hemolytic toxin. It is always important to avoid doing harm in any treatment of disease. Also it seems to me a desirable innovation that we should shift our attention from the blood to the blood-forming organs. It may be considered that in a strict sense a patient does not die from anemia but only from exhaustion of the blood-making organs, and the most vital requirement is to guard the function of the latter. If these

organs are so damaged that they can spontaneously support only one or two million red cells, any method of forcing them artificially to support three or four million corpuscles may create a temporary appearance of clinical improvement at the price of overstimulation and subsequent fatal exhaustion of the blood-forming function. Therefore, we have in general refrained from using either transfusions or drugs. As an exception, there is no doubt that transfusions are beneficial even to the extent of saving life in threatening emergencies; but, otherwise, either large or small injections of blood or hemoglobin have seemed to us disadvantageous. Arsenic, as a visceral poison, must be of dubious value for a visceral disease. If it stimulates the bone marrow, we wish to avoid it. If it blocks the action of a hemolytic toxin, we prefer to get rid of the toxin. Occasionally its use may appear necessary for the more hopeless cases. But, up to the present we have tried to treat by functional relief alone, in order to observe the results of this plan in its pure form. In the cases where it has failed we have not yet gained any success by resorting to either arsenic or transfusions.

(3) *Diet.*—We have made no attempt to modify the intestinal flora, but have given meat and all ordinary foods in as liberal quantities as could be taken, in 3 to 6 meals per day as might best suit the appetite and digestion. The feeding of bone-marrow has been tried desultorily. Liver feeding has been employed more intensively, as suggested by Whipple's experiments, but after a year of observation we are not sure of the results. Patients eating considerable quantities of liver cooked in a variety of ways have improved but so also have other patients who received no liver, and owing to the nature of the disease a positive interpretation of the result seems premature. Iron in the form of Bland's pills and also iron-rich foods have been used in order to make sure of an abundant supply of iron, but no specific value has been noticeable. Cod liver oil has also been tried without evident results. The main feature of our diet is that it is rigidly salt-free, in the same sense as that employed for hypertension cases. (Allen, Frederick M., *Treatment of Kidney Diseases and High Blood*

Pressure. Part 1, 1925.) This procedure was suggested not by any theory but by the existence of marked edema in some of our early cases. It is rational as a general measure because of the great frequency of visible or invisible edema and of high blood chloride levels in anemia cases. Whether it has any deeper influence, osmotically or otherwise, upon the formation or destruction of red cells is unknown. Certainly the cases with edema have responded with the greatest benefit, so that edema ranks as a favorable symptom in our experience. We have proved that the increase in corpuscle counts and hemoglobin values is not due to mere alteration in blood volume. This exclusion of sodium chloride stands in interesting contrast to the customary administration of hydrochloric acid for the gastric achylia and digestive disturbances. Somewhat to our surprise, both appetite and digestion have improved markedly in most and have served as an important aid in the recovery of strength. The accuracy of the diet should be checked up by laboratory analyses to make sure that the daily sodium chloride output in the urine is below 0.5 gm., for even with this degree of strictness the removal of edema is slow and difficult in many cases. It is highly important that the diet shall be appetizing as well as salt-free, and for this purpose treatment in a suitable institution is to be preferred.

#### RESULTS.

In about a year we have treated 35 cases, 30 of which were pernicious and the other 5 an assortment of severe but nonpernicious anemias. Among the 5 nonpernicious cases, there was 1 fatality in an infantile anemia which received no benefit from this or any other treatment. The other 4 have shown various grades of improvement up to apparent recovery, and the average results are decidedly better than in the pernicious group.

Of the 30 patients with pernicious anemia, 7 have died. This is a high mortality, which is to be expected when we invite physicians to send us the worst cases of this disease. The deaths may be divided into 2 classes; 2 patients died soon after admission, from hopeless severity of the anemia; the other 5 had

advanced nerve degenerations, and died from progression of these even though the blood count generally improved. Our experience is that the nerve degenerations are the worst of all prognostic signs. When they are slight or moderate, improvement is possible but is extremely slow and difficult. When extensive paresis or paralysis is present, there seems to be no hope. In all the fatal cases either transfusion or arsenic was tried without avail, and the only criticism may be that we perhaps waited too long before resorting to them.

The remaining 23 cases were also of several years' duration, and had progressed to a severe stage in spite of the usual treatment with arsenic or transfusions, or both. A number of them appeared to be certainly in a phase of decline when received. It therefore seems remarkable that these 23 cases have developed definite remissions or at least remained stationary. In other words, all the cases which were not in an acutely fatal stage at admission have shown various grades of improvement. It is hoped also that the remissions will have a more prognostic significance when occurring spontaneously under these conditions than when they are forced by transfusions or drugs. The following 5 features of improvement have seemed significant:

(1) With the combination of tooth extraction and diet, sore mouth and glossitis have disappeared in every case.

(2) Appetite and digestion have improved quickly or slowly. Diarrhea has ceased in every case. Constipation is not relieved by salt-free diet but requires cathartics or enemas.

(3) Certain patients showed more or less fever at first, but this has changed to a normal temperature in every instance.

(4) The yellow color of the tissues and blood plasma and the urobilin excretion have diminished or disappeared, as a rule. This is interpreted as meaning a reduction of hemolysis.

(5) There has been improvement in the number and character of the blood cells and also in the strength and general condition of the patients in nearly all instances. Any observer must be impressed by the tremendous



differences between anemia cases, and there are similar differences in the response to treatment. Some patients show a striking clinical transformation with scarcely any change in the blood count, while others may multiply their red cells two or three fold without much change in their physical strength. At one extreme are patients who return almost to normal in both blood count and general condition, and at the other extreme are those who improve scarcely at all in either respect.

The following case histories will serve as illustrations. The result in Cases 2732 and 2770 are the best in the series, and perhaps to some extent accidental remissions. The outcome in Case 2890 is worse than the average, but illustrates the bad prognosis with advanced nerve lesions. The majority of results are intermediate between these examples.

Example of Marked Clinical Improvement With Intermediate Degree of Blood Improvement.

Case No. 2732. Male, age 65. Family history negative. Patient had "consumption of the bowels" at 3½ years and was sickly up to age of 14. Afterward was strong and lived a rough

life; had gonorrhea first at 15 and many times later; used alcohol to great excess; became more moderate in later years. He developed hypertension and angina pectoris, which disappeared after onset of anemia.

Four years before admission, a physician, consulted on account of weakness, diagnosed pernicious anemia on the basis of typical blood findings and gastric atrophy and achylia. All the teeth were extracted and HCl, iron and arsenic used. No transfusions were ever given, because patient positively refused them and his physician doubted their value. There were 6 relapses, each accompanied by great edema, and the general progress was downward.

The patient was admitted in his sixth and worst relapse, bedfast, supposedly moribund. The complexion was pale and yellow, tongue and gums ulcerated, liver and spleen slightly enlarged, great ascites and general edema present, breathing difficult, paresthesia present but paresis absent; anorexia, epigastric pain, indigestion and diarrhea; fluctuating temperature up to 102° F. Wassermann negative.

Salt-free diet was first used in this case as a treatment for the edema. The gradual complete removal of the dropsy was accompanied by a weight loss of 20 lb. Meanwhile all symptoms were relieved, but there was still a stormy course due to an influenzal infection and later to a thrombosis of the left femoral vein, the extremely weak patient being in danger of death on both occasions. The most striking feature was the great clinical improvement even before the blood showed any important change.

BLOOD EXAMINATION.  
Case No. 2732.

Date 1925		R. B. C.	Hb. %	C. I.	W. B. C.	Poly. %	Eos. %	Lymph. %	Mono. %	Myel. %	N. Reds*
Mar.	21	1,020,000	35	1.7	3250	26	1	65	4	4	306
	22	1,040,000	32	1.5	3000	30	2	56	0	12	344
	29	1,650,000	45	1.5	2240	47	1	49	0	3	33
Apl.	3	1,660,000	47	1.4	5900	—	—	—	—	—	—
	12	1,180,000	47	2.0	5600	—	—	—	—	—	—
	19	1,120,000	45	2.0	5600	73	0	22	2	3	20
	26	1,450,000	44	1.5	7800	—	—	—	—	—	—
	30	1,460,000	45	1.5	8600	72	0	27	0	1	14
May	8	1,540,000	—	—	6000	44	1	53	2	0	15
	15	1,590,000	40	1.3	9800	49	3	47	0	1	14
	28	1,680,000	45	1.3	6700	45	7	47	1	0	16
June	12	1,610,000	43	1.3	3600	26	1	71	2	0	20
	22	1,690,000	48	1.4	3800	17	2	79	2	0	16
July	1	1,380,000	40	1.4	3300	24	5	70	1	0	15
	6	1,490,000	40	1.4	4700	28	2	69	1	0	41
	13	1,230,000	35	1.4	4000	20	1	77	1	1	27
	24	1,400,000	35	1.25	3000	11	7	81	1	0	50
Oct.	31	2,250,000	80	1.6	9600	45	0	54	1	0	2

The shape of the red cells improved much during treatment, but megalocytosis persisted. Platelets increased in number.  
\*Nucleated red cells seen in counting 100 white cells.

The patient was discharged practically symptom-free and in excellent strength notwithstanding the continued low blood count. He has since carried on his regular work as an advertising agent. The blood picture has since remained stationary, this number of corpuscles appearing to be the maximum which the damaged organs can support without stimulation. The patient declares he feels as well as ever in his life, and he has yet shown no tendency to relapse.

Example of Marked Improvement in Blood and Clinical Condition.

Case No. 2890. Male, age 42, admitted July 3, 1925. Father died of "rheumatism" at 58 and mother of diabetes at 36, but his 4 brothers, also his wife and 5 children are alive and well.

Personal history was negative up to "typhoid pneumonia" in 1915, after which he never regained his previous rugged strength. In 1916 he began to have attacks of diarrhea, which in-

creased so that for the past 2 years he has seldom had a formed movement. In October, 1924, there was onset of marked weakness, with numbness of hands, and drowsiness. In December he entered a hospital and pernicious anemia was diagnosed. Besides treatment with iron, arsenic, HCl, etc., he received 4 blood transfusions (each 480 c.c.) up to May 1925; each being followed by distinct but transitory benefit. The diagnosis was established by numerous careful blood examina-

tions showing all the typical cell forms of pernicious anemia.

At admission the patient was asthenic but without paresis. Complexion was florid, not yellow. Wassermann negative. Edema was barely perceptible in the ankles. The tongue was fissured and attacks of glossitis were frequent. Appetite was poor and indigestion and diarrhea troublesome. Only 4 teeth remained, and though apparently sound they were removed. Otherwise diet was the only treatment.

#### BLOOD EXAMINATION.

##### Case No. 2890.

Date		R. B. C.	Hb.	C. I.	W. B. C.	Poly.	Eos.	Lymph.	Mono.	Myel.
1925			%			%	%	%	%	%
July	1	1,410,000	40	1.4	4600	66	3	31	0	0
	10	2,030,000	50	1.25	8750	69	1	26	3	1
	31	2,960,000	80	1.4	9250	79	2	18	1	0
Aug.	14	3,040,000	80	1.3	6000	73	2	24	1	0
	30	3,100,000	90	1.5	5800	57	3	36	4	0
Sept.	16	3,940,000	85	1.1	6200	67	0	24	8	1
Jan.	4	4,415,000	82	1.0	8900	70	2	20	5	0
1926										

Megaloblasts and the complete pernicious blood picture were seen in the earlier films but afterward disappeared. The average diameter of the red cells, however, was always greater than normal.

The patient was discharged September 20, 1925, symptom-free, with excellent appetite and strength. The blood count of January 4, was done in the hospital where he was originally treated. The normal blood picture has since caused several pathologists to doubt that the patient ever had pernicious anemia. He continues to carry on his regular work without disturbance.

#### Example of Marked Improvement in Blood Without Corresponding Clinical Change.

Case No. 2770. Female, age 58. Admitted April 23, 1925. Family history negative. Personal history included hip disease in childhood, erysipelas twice, peritonitis twice (without opera-

tion), and asthma since an influenzal infection at the age of 22.

Eighteen months before admission she began to notice weakness and unsteadiness in walking. Pernicious anemia was diagnosed and all teeth extracted. In spite of arsenic, HCl, etc., and one blood transfusion, the progress was rapidly downward. At admission she was so weak that her time was divided between bed and chair. Lemon yellow skin pigmentation, sore tongue, paresthesia in all limbs and partial paralysis of legs, girdle sensation about waist, moderate enlargement of spleen and liver, failing appetite and digestion, and slight edema were present. Wassermann negative. Under diet alone the blood showed the following changes:

#### BLOOD EXAMINATION.

##### Case No. 2770.

Date		R. B. C.	Hb.	C. I.	W. B. C.	Poly.	Eos.	Lymph.	Mono.	Myel.
1925			%			%	%	%	%	%
Apl.	24	1,310,000	34	1.3	4400	46	1	47	4	2
May	3	1,800,000	65	1.8	7800	35	2	62	0	1
	11	2,280,000	60	1.3	5600	44	1	52	1	2
	25	4,130,000	80	1.0	7300	61	3	30	5	1
June	12	4,750,000	85	0.9	8000	51	5	42	2	0

The earlier films showed all the changes of pernicious anemia including the presence of megaloblasts. In the last film the blood appeared practically normal.

This improvement in the blood was radically different from anything in her former history. The skin became nearly clear and the appetite and digestion fairly good. Otherwise the clinical condition was practically unchanged up to discharge on June 17, 1925. At last report the paresis had advanced somewhat and some mental disturbance had developed.

In general, spectacular results must not be expected, and invalidism must continue in the majority of very severe cases. It is an obvious rule in all metabolic diseases that the best re-

sults cannot be expected in the worst cases. Not only is the average physical condition of these patients poor, but the mortality will doubtless increase with time. Some of them drag along in unsatisfactory condition because the primary infectious cause has not been successfully located or cleared up. Granting that this has been accomplished, the patient with severe anemia, like the patient with severe diabetes before insulin, is still subject to set-



backs from colds and other slight accidents. If these are avoided, the damaged function in the worst cases may be incapable of meeting permanently even the minimum demands upon it, so that it gradually fails by exhaustion, without proving that such an outcome is inevitable for the disease in its less extreme forms. If the general principle is correct, its most successful application must be sought in the milder stages, and stress must be laid upon the earliest possible diagnosis and treatment.

After a short interval of further observation, our cases will be published in greater detail in the *Journal of Metabolic Research*. Only a number of years of study of such a variable disease can decide whether we have encountered anything more than spontaneous accidental remissions, and whether the proposed principles of treatment have any basis or value. The known failure of other therapeutic methods, and the necessity of explaining what we are attempting during the required period of study, furnish the compelling reason for risking the possible embarrassment of being compelled later to withdraw unfounded suggestions. It is hoped that the study at least will not be entirely without value. At present it seems to support the following provisional conclusions:

(1) The primary step in the treatment of anemia is to find and remove infectious foci, as agreed by most writers; and our observations tend to assign first importance to diseased teeth. Other foci should obviously not be neglected.

(2) Therapeutic attention should be directed less to the blood and more to the blood-forming organs. The latter may possibly be broken down by stimulation which forces them to maintain a higher number of circulating corpuscles than they are spontaneously capable of maintaining.

(3) Treatment without transfusions or arsenic has seemed to be at least as successful as with them, and the question is raised whether they should not be discarded for routine purposes and reserved for special or emergency uses.

(4) Salt-free diet is beneficial at least in the cases with edema or salt retention, and is

worthy of trial for its effect upon gastro-intestinal and general symptoms.

(5) The question is raised whether pernicious anemia is an inevitably progressive disease, or whether it belongs in the group of disorders which are controllable by removal of the primary infectious cause and relief of functional overstrain.

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## TREATMENT OF SOME COMMON CONDITIONS BY PHYSICAL MEASURES.

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(Read by invitation before the Burlington County Medical Society, April 14, 1926.)

The scientific application of electricity and other physical measures has developed within the last 3 or 4 decades. Those pioneers who had the temerity to stand up under the jeers and abuse of their confrères certainly had a vision. Had it not been for these brave souls, we would not now be enjoying the benefits of a better and scientific knowledge of the uses of physical measures, nor would we have the modern and well-built apparatus to use. They certainly deserve far more credit than is usually given them.

The experience gained during and since the late war has developed a large body of interested physicians who have delved into the mysteries of electrotherapy and its allied subject, physiotherapy, so that there is a lessening of prejudice all over the country and a willingness to investigate what a few years ago was taboo. Ignorance of this therapy has given place to knowledge and the future looks most hopeful.

In considering the topic for discussion at this meeting, it seemed to me fitting that those common conditions met with in one's every day practice would hold most interest to you, so a few have been selected to treat briefly, attempting to give the underlying factors and reasons for such measures together with their practical application. It must be understood that in such a brief paper, only the high points can be touched.

*Sprains.*—While the same treatment may

be applied to a sprain of any part, the ankle sprain will be used here because it is the most common. As the pathology is so well known, mention will be made only of the rapid swelling and pain as the result of a rapid in-pouring of the protective serous exudate that nature supplies so bountifully for splinting the injured parts. This, together with the extravasated blood and circulatory stasis, make a condition that in a few hours can wholly incapacitate the host. The long honored treatment is that of lotions and strapping. When available, the modern treatment is by electric measures, and if seen during the first 2 to 4 hours, 1 or 2 treatments will suffice. If, however, the case goes over this time, the exudate becomes more firm and gradually becomes organized, so that a larger number of treatments will be required. In the latter cases it may be best to place straps during the interim of treatments, but in the early cases strapping is absolutely unnecessary. The method recommended consists in use of the static wave current, applied by a metal electrode over the swollen part; using the positive pole, with the negative grounded. This causes an alternating contraction and relaxation of the cellular tissues, inducing an expression of the exudate through the natural lymph channels. When the exudate is firm, from delayed treatment, this same effect is had but in a slower way, as it becomes more and more difficult to secure the results later. With this relief from exudate pressure there is also relief from the stasis, and normal conditions are rapidly restored. As you do not all have access to the static machine, you have in diathermy a method of second choice; if you will use this correctly you can activate the circulation and overcome the stasis, and if the exudate is not too well organized you may thus restore function. Apply the current so that it will flow directly through the part and give the skin tolerance for at least half an hour; more can be given to advantage. Have the skin wet but not soaped as some do, as the soapy water offers resistance to the current and you will get only a fraction of your amperage and will be disappointed in the results. Plain water is all that I use, and it is the best.

*Backache.*—The etiology is so vast, there being so many types of backache, we will discuss only those caused by strain of the sacroiliac synchondrosis and sciatic neuritis. These types are so nearly alike that what is done for one will in a measure apply to the other. In both, there is a muscular spasm that produces the pain. In the joint strain we need to use a retaining belt or other device, in addition to whatever therapy we select, as there is need of fixation until nature steps in with her healing tendency. In both cases we use the heat and mechanical measures just mentioned, the diathermy and static wave current. In some cases the heat may be from a parabolic hooded therapeutic lamp of high candle power, applied over the area for a time sufficient to produce an active hyperemia. If diathermy is used, it should be with the same care of the skin and electrodes, being careful with the high amperage current that good contact is assured, so that there will be no burn of the skin. Such burns heal very slowly and may make trouble. Whichever method of heating is used, it should precede the static wave current. If the latter is not available, the heat may give excellent results if continued long enough and with repeated sésances; it will always give relief, at any rate, and often this is all the patient asks. The wave current offers restoration and naturally is the treatment of choice.

Right here allow me to interject some words in reference to what is called "violet-ray". Many physicians who are not conversant with the use of electric currents, purchase a high frequency machine and start out to practice from what the agent tells them, and the general rule is to advise this so-called violet-ray. This word is a misnomer, and should not be in the medical lexicon. In the first place it is not a ray that issues from the vacuum tube, but an effluve, and the usual color is a pale blue; only a very low vacuum gives the violet color. This is a beauty parlor word, coined by laymen, and it should be beneath the dignity of a physician to use it. The use of the vacuum tube is so general and its benefits so below what one should secure, that it is no wonder many physicians berate the value of



electrotherapy when use of this tube is all they know about the subject. In purely local and surface conditions it may be of value, but in the light of present knowledge it is little used except in cavity work.

*Fractures.*—In these, surgical care necessarily is the first thought. It has been the custom to use massage after the early days following splinting, the time when this was to be given depending upon the particular physician in charge. If massage is indicated, why not use something better for the same effect? I have advocated for some years the use of the static wave current applied early to relieve the swelling just as we use it in sprains, for this current effect is passive and cannot in any way do harm, if properly applied. When this is not available, we can resort to diathermy for similar results, although this will not be quite so effective. In applying either or both, the physician can apply metal splints to which he can attach his cords, and thus dispense with removing the splints and dressings each time. If this is not practicable, then the usual care in removing and placing electrodes can be used and the currents given satisfactorily. By this method the stasis and inflammatory effects of the trauma will be quickly allayed and the restorative process enhanced, in fact the healing process will take place in about one-half the usual time and the end result will be devoid of stiffness, ankyloses, or other sequels.

We physiotherapists generally have such cases referred to us by the physicians after the joint has become ankylosed or stiff from over-splinting or other causes. If, unfortunately, the case reaches this condition, the effort for relief becomes a different matter. We must use far more active measures, such as deep diathermy, static wave and static sparks, the latter producing marked contractions of the musculature. Care in prevention is far better than attempting to undo the damage done by oversplinting. Happily this condition is seen less often of late.

*Facial Paralysis.*—This is of very frequent occurrence, if I may judge from the number that come to me. There are 2 types, the peripheral, or neuritic, and the central. The latter

and more serious type is less frequently seen; a fortunate fact, for it is less amenable to treatment. The neuritic form is usually due to a focal infection. The paralysis comes on without warning and is apparently due to an exposure to a draft, such as is caused from an open window. This is really only a contributing cause, as the infective inflammation has been ready to respond to some slight condition, a "last straw", which precipitates the paralysis. The first step in treatment is removal of the infection and then institution of the therapy. The earlier the electric treatment is applied the more quickly will the result be attained. This is entirely opposed to the general neurologic teaching, but experience from a large number of successful cases makes this statement trustworthy. There is no difference in the pathology of the nerve inflammation over that of other parts of the body, therefore, why should there be any difference in the therapy? The inflammatory exudate is poured out just the same, and its pressure effects upon the neurones are just the same, cutting off cell activity; therefore, this must be removed, and the sooner the better. If the case is seen within 24 hours after inception of the paralysis, 2 or 3 treatments will usually suffice, but if later than that time, the number of treatments will be proportionately greater, and the longer the case goes the more organized will the infiltrate become and the greater the difficulties encountered. Usually this neglect is due to bad advice from the consultant; therefore, I ask you to consider this from the patient's standpoint and give him the benefit of early treatment.

Treatment starts with heat, and this is usually applied in the early cases by use of the high candle-power therapeutic lamp, the time being determined by the induced hyperemia. In the delayed cases, diathermy is a better method of securing this hyperemia. The next step is use of the static wave current, applied by a shaped metal electrode fitted front and back of the ear to cover the nerve distribution. The usual site of the exudate is at the foramen where the nerve makes its exit. The wave current breaks up the exudate and promotes its absorption. After static wave treatment

we follow with the slow surging sinusoidal current, of the constant-current type and better known as the galvanic; this is for restoration of nerve tone. This is applied by the use of a larger dispersing pad applied to the occiput, with the smaller active pad placed over the areas of nerve distribution, each area receiving from 10 to 15 minutes of treatment. The dosage should be small so that the nerves will not be overstimulated. In the very early cases the heat and static wave will be all that will be required.

*Hemiplegia.*—This is a common form of paralysis and is not a type that is amenable to drugs, as you all know. The fact is, it is not easy to influence by any form of therapy, yet electric measures offer far better possibilities than any other. Usually, these cases are left untreated until degenerative changes have far advanced. Many cases suffer with painful contractures of fingers or whole limbs, when left untreated for a considerable length of time, and this condition is often very hard to relieve. If this could be realized by physicians generally, many patients might be saved from much suffering.

Treatment is by the use of autocondensation, for relief of the hypertension and for its eliminative effects. The value of this measure can be proved by use of the laboratory tests. The metabolic effects are most pronounced.

As the sinusoidal current is the one measure for activating the nerve cells it is generally used in this type of paralysis, but prior to its application it is always well to have the limb thoroughly warmed. This warmth promotes the current activity and less dosage is required for a given effect. A very far advanced case will not respond at all if the muscles are cold, so this preliminary heating is essential and it may be preferably given by diathermy. This is done by the use of a metal electrode applied under the shoulder for the arm, and under the buttock for the leg, with a metal cuff bandaged at the wrist or hand for the arm, and at the ankle or foot for the leg. A considerable amperage is necessary because there is a large area to be heated.

*Bilious Attacks and Sick Headaches.*—These generally go together and may be considered

as one condition. The usual prescription is calomel and some saline, with directions to come again if no better. This is palliative therapy and does not reach the cause. Such headaches do not necessarily suggest to the busy doctor the need of a careful examination, and many cases go on for years without proper care. An examination with restricting clothing removed is essential. One must be able to make the proper physical examination in order to find whether or not the liver is actually the cause. In many cases it is easy to determine this by palpation, but when this is impossible for various reasons, we have recourse to the aid of x-rays. In cases of long standing, when there is no undue colonic ballooning to prevent, we can outline the liver very easily and make our diagnosis accordingly.

Let us take a little time to consider the liver as a factor. It is one of the most important organs in the body, a fact not always realized. Not only is it a bile manufactory, but a storehouse for the sugars of the body. In addition to this, it is a chemical laboratory of the first class, taking care of the toxins, converting the results of digestion into the various uses of metabolism, a function of greatest importance. Lying as it does at the portal of the digestive tract, it becomes engorged at each food intake, and this is purely a physiologic action. If, however, the patient indulges in faulty food combinations, so that he suffers from digestive troubles, the physiologic condition gradually becomes pathologic, as the engorgement is not relieved after each meal but continues without interruption until swelling of the liver becomes greater. With this, the functioning becomes less active and the eliminating factors are lessened until we have the toxic symptoms known as biliousness. The liver happily does relieve itself from time to time and these are sometimes called "liver explosions", and these become more and more severe as time goes on. The blood stream being surcharged with these toxins, it is only natural that the brain should suffer and we have the headaches so hard to endure.

Treatment naturally starts with such dietary and other regulations as help toward prevention, without which little advance could be



made no matter what form of therapy is used. The main method of attack of this liver enlargement is by the use of diathermy; which must be given in large dosage, with large electrodes, and for long séances, if one expects to get results. By large, I mean such dosage as will be tolerated by the skin with electrodes of sufficient size to cover the whole liver area, and given for never less than half an hour, and preferably for longer periods of time. The effect is to unload the circulatory stasis and produce a diminution of liver size. This change is gradual, of course, but by persistent treatment the ultimate result will be a complete reduction in size and restoration of function, relieving the headaches and other symptoms completely. Following the first treatment, it is good therapy to prescribe a dose of castor oil, as the unloading of toxins is so great that there is a tendency to a severe headache within the next 24 hours from re-absorption unless this practice is carried out. This dose of oil may have to be repeated every 4 or 5 days during the early part of the treatments, as the toxins are being eliminated actively during these early days, and later about once in every week or two. Following the diathermy, we may elect to use static wave current over the liver area for its active effect upon elimination, but this is not always necessary. It is always good practice to check up results by use of the laboratory. Such tests, together with regular physical examinations, will keep one in touch with progress and make it possible to give a fairly correct prognosis.

*Neuritis.*—Without some reference to this prevalent condition, a paper such as this would be incomplete. We find a large percentage of our patients complaining of painful conditions of various parts of their bodies, and while all such conditions are not true neuritis, many are, and it is well to be able to differentiate. We have myositis, bursitis, perineuritis, as well as neuritis, all giving symptoms that cause one considerable mental effort to make a diagnosis. Of course in bursitis, the x-rays will clear up the diagnosis, but in the others we cannot depend upon this. There is one fairly infallible test and that is by use of the static wave current. A nerve or muscle that is absolutely well,

that is, having no inflammatory involvement, will not respond painfully to this current, no matter how strong it may be, but if there is or has been such an inflammation, the response is painful, and the degree of pain corresponds to the involvement. Now, since you do not all have access to static machine, you cannot so easily decide the question, and I know of no other test that will replace it. The only thing to do when you are undecided is to get in touch with some one who has a static machine and who knows how to use it. It has been the habit of recent years to call all pains that involve either the arm or leg "neuritis". Many are what we call perineuritis, a superficial inflammatory involvement of the sheath of the nerve and not of the neurons. The exudate making pressure causes the pain, and while the involvement is superficial it does in time become a deeper one if not allayed, so that we then have true neuritis.

The treatment is largely static current application, as this offers the best results through its mechanical action upon the inflammation; in addition to which we have the cell gymnastics for restoration of nerve tone. I will not go into details here, but suffice it to say that all cases should respond either promptly or at a time proportionate to the length of involvement. We always expect 100% of good results. In lieu of the static current, diathermy may be used and in some cases it does well by its hyperemia induction. Some cases react favorably to the use of the nonvacuum tube, these being of the perineuritic type. This tube is infinitely superior to the vacuum tube from every standpoint.

The bursitis conditions which may simulate neuritis or be an added involvement, will succumb to diathermy. The deposits will be dissolved by this and the static current will take care of the pain.

The treatment outlined is applicable to neuritis in any part of the body, each area having its own particular adaptation of this. Before concluding this brief statement concerning neuritis, let me offer a word of warning in reference to splinting for this painful condition. Many physicians advise using splints to hold the muscles at rest, since this is

usually indicated in the treatment of inflammations. The theory is correct but the practice is wrong in the average case. Atrophy is one of the possibilities, and temporary ankylosis is another. I have seen very bad results from plaster casts worn for several weeks in the treatment of sciatic neuritis, and even the carrying of the arm in a sling has been a disadvantage in some cases that have been referred to me. A certain amount of motion will keep up the muscular tone but caution must be advised as to how much is allowed.

This is a very incomplete recital of some of the problems that come within the province of the general practitioner in his daily practice, and while it is lacking in many details, I trust that it will be of some service to you and arouse added interest in your minds for this form of therapy. If I am any sort of a prophet, I will state that in my humble opinion, within a very few years, the physician who is hoping to be in the vanguard of therapeutics must either be equipped for this work or have a working knowledge of it so that he can advise his patients intelligently. Another essential matter is that physicians who desire to carry on in this line of work shall not accept teaching from the selling agents, but get their education in physiotherapeutic details from experienced physicians just as they would were they planning to take any other post-graduate work. At present writing, there is too much dependence placed upon the agent's judgment in therapy, a condition that would not apply in any other type of therapy.

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### REPORT OF SEVEN CASES OF ACUTE APPENDICITIS, OCCURRING IN CHILDREN, AND TERMINATING FATALLY.

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During this year we have had 7 cases of acute appendicitis, in the children's ward, which have ended fatally. No disease has been more thoroughly analyzed, during recent years, than appendicitis. Since Dr. Reginald Fitz, of Bos-

ton, in 1886, ascribed the appendix as the cause of most inflammations in the right iliac fossa, and introduced the term appendicitis, its diagnosis, symptomatology, pathology and treatment have been widely broadcast. Surgical pediatrics has not advanced with the rapid strides seen in medical pediatrics; indeed it has not kept abreast with the other departments of practice. Especially is this true in relation to appendicitis.

Case 1—N. L., female, aged 10, was admitted February 11, at 11:25 a. m., with history of nausea and vomiting, abdominal pain, fever and restlessness. Had been sick 3 days with vomiting, followed by generalized abdominal pain. Unable to take food. No history of previous attack. She was fairly well nourished, pale-faced, white child, slightly cyanotic, quiet and appeared very ill. Eyes sunken, surrounded by a dark circle. Respiratory rate rapid, labored, and entirely thoracic. Expansion equal; good resonance throughout. No râles. Heart rapid, rhythm good; border enlarged to the left; no shock or palpable thrill. Abdomen scaphoid; right rectus tense and prominent; skin dry, smooth, no rash; no masses. Liver and spleen palpable. Temperature 104°; pulse 140; respiration 136. Diagnosis: A very acute appendicitis; question of perforation to be considered. Operation: At 12:45 p. m. (1 hour and a half after admission. Chloroform anesthesia. Duration 18 minutes. Right semilunar incision. Fecal material free in the abdominal cavity. Perforation about midway of appendix half-inch in diameter through which discharge was flowing. No attempt at walling off. Rubber tube drain in pelvis. Laboratory report. Diagnosis, acute suppurative appendicitis. Appendix swollen, purulent. All coats infiltrated by numerous pus cells; marked edema and early necrosis of the mucosa. Child ceased to breathe at 8:45 p. m.

Case 2—B. S., female, age 10, admitted February 26, at 12:45 p. m., with pain in lower abdomen, both sides, nausea, vomiting and high fever. History of attack: Began 6 days ago with sore throat. Severe abdominal pain and tenderness. Yesterday had frequency 20 to 30 drops. Has not voided today. Cathe-



terized and recovered 6 drops. Has a constant desire to void. Face thin; worn-out expression; looks very sick. Mouth and tongue coated, dry; tonsils enlarged, inflamed and looked infected. Many anterior and posterior palpable lymph-glands. Chest expansion equal, respirations rapid (30). Heart sounds clear, regular and rapid. Abdomen: Slightly distended; large mass felt in lower abdomen, more pronounced toward the left side. Temperature 103°, pulse 100. White count 23,550; hemoglobin 70%. Urine negative for albumen and sugar, few red and white cells. Impression: Appendiceal abscess. Operation: At 5:30 p. m. (5 hours after admission); nitrous oxide and ether anesthesia: Duration 38 minutes. Straight incision. Appendiceal abscess found in left pelvis, extending left to sigmoid and left adnexa, above to small intestines, limited to the right by the omentum. The appendix was easily removed. Four cigarette drains placed. Laboratory report: Gangrenous appendix covered with pus cells. Concretion in the lumen. After operation the patient gradually became worse, and died at 2.10 a. m. the following morning.

Case 3—B. J. R., female, 2 years of age, was admitted February 28, at 9:15 a. m., with history of frequent vomiting and pain in right lower abdomen. Slight fever. The trouble began yesterday morning with abdominal pain. Bowels moved with a physic. Has had a slight cold and cough for 1 week. Breath sounds were somewhat roughened at left lower lobe posteriorly; occasional bronchial râles heard. Abdomen: Both recti fairly rigid; tender over entire abdomen; some distension. X-ray report: No pathology noted in chest. Urinalysis negative. White count 34,700. Impression: Acute appendicitis; probably perforated, with peritonitis. Operation at 1 p. m. (4 hours after admission). Chloroform anesthesia. Duration 15 minutes. Davis incision. On entering abdomen considerable amount of pus found, no attempt at walling off. Appendix was found well toward midline. Many large lymph glands size of almond found in the mesentery of small bowel. Appendectomy. One rubber tube in pelvis. Laboratory report: Appendix swollen, covered by flakes of pus, necrosis of

mucosa and submucosa, marked edema, purulent infiltration of all walls. After operation the condition seemed better for a few hours, then became worse. Both lungs became filled with mucous râles. Ceased to breathe 10:15 p. m. same day.

Case 4—I. M., male, colored, aged 7, was admitted March 26, 11.10 a. m., with pains in right lower abdomen, frequent vomiting, fever and diarrhea. Illness began 4 days ago, with sudden sharp pain in the umbilical region; nauseated; constipated until mother gave pill, since then bowels became loose with involuntary movements. No history of previous attack. Heart and lungs negative. Abdomen distended and with marked tenderness. White cells 17,800; temperature 104°; pulse 140; respiration 52. Impression: Acute appendicitis; perforation, with general peritonitis. Operation at 12:45 p. m. (1½ hours after admission). Chloroform anesthesia. Duration not noted. Semilunar incision. Free pus in the peritoneal cavity, not walled off. Appendix very acutely inflamed, swollen, covered with flakes of lymph. Lymph also on ascending colon, cecum, and small intestine. Appendectomy. One drain in pelvis, 1 near stump of appendix. Laboratory report: Diagnosis. Acute suppurative appendicitis. Ceased to breathe at 7:45 p. m. same date.

Case 5—P. M., female, aged 6, admitted April 19, at 2:20 p. m., with pain in the epigastrium. Headache and emesis for 2 days. Yesterday morning at 2 o'clock awakened with severe pain in upper abdomen. Diarrhea. Well nourished toxic-looking girl. Abdomen tender and rigid over whole area, most marked in right lower quadrant. No masses. Urine 1012; heavy trace of albumen; sugar absent. White count before admission, 23,100; after, 22,700. Temperature 105°; pulse 132; respiration 36. X-ray report: Chest is negative. Impression: Acute appendicitis with general peritonitis. Operation at 5:15 p. m. (3 hours after admission) by Dr. Mecray. Chloroform anesthesia. Duration 16 minutes. Semilunar incision. Abdomen filled with cloudy serum. Appendix swollen. Appendectomy. One rubber tube in pelvis. Laboratory report: Culture showed hemolytic streptococci. A corroded pin was

found embedded within the walls of the appendix. Progress: The patient was a poor operative risk, but stood anesthetic fairly well. Slept some during the night. Condition became worse and ceased to breathe at 11 a. m. next morning.

Case 6—C. S., female, aged 7, admitted April 19, 2 p. m., with pain and tenderness in lower right abdomen, nausea, vomiting and fever. Five days ago began to have pain in abdomen; slight sore throat for 2 days. Constipated; mother gave child physic and she then had frequent bowel movements. Fever continued. Throat got better, but pain in abdomen became worse, with vomiting. Heart and lungs negative. White count 38,400; temperature 103.4°; pulse 120; respirations 36. Impression: Acute appendicitis with general peritonitis. Operation at 5:15 p. m. (3 hours following admission). Chloroform anesthesia; duration 20 minutes. Davis incision. Appendix removed. Large and small bowel inflamed. Considerable amount of cloudy, greasy fluid free in the abdominal cavity. One rubber tube in pelvis. Laboratory report: Pure culture of hemolytic streptococci. Diagnosis of chronic interstitial appendicitis; acute suppurative appendicitis. Appendix swollen. The peritoneal coat roughened. Microscopically, appendix showed marked edema and infiltration by pus cells involving especially the peritoneal coat. In addition, there was a chronic interstitial and chronic catarrhal inflammation. After operation patient gradually became worse, more restless and delirious. Ceased to breathe at 5:10 a. m. next morning.

Case 7—R. H., female child 2½ years old, admitted May 3, 12 o'clock noon with pain in abdomen, nausea, vomiting and fever. Began 2 days ago with abdominal pain. No frequency. Bowels moved this morning. Very sick, restless, face flushed, respirations rapid, pulse rapid and weak. Abdomen: Markedly distended and tense. Tympanites and rigidity. Urine 1030; trace of albumen, no casts. White count 20,800. X-ray report: Chest shows no definite pathology. Colon much distended

with gas. Impression: Acute peritonitis; too ill to operate. Ceased to breathe at 8:15 p. m. next day. Autopsy findings: Plastic lymph on large and small bowels and bladder, free pus in the peritoneal cavity. Appendix acutely inflamed, covered with lymph. No attempt at walling off. Diagnosis: Acute diffuse suppurative peritonitis. Acute suppurative appendicitis.

All these cases were brought to operation at too late a period. All died of general peritonitis, secondary to acute appendicitis, except case No. 3 which probably died from edema of lungs.

All were operated on promptly on admission to the hospital, except the last case which was not operated on because of the grave condition of the child. All the cases showed a deviation of the appendix from the fixed position so frequently seen in the adult; the position being usually higher and internal to the so-called McBurney's point, due to not having completed the usual change of position to the right and downward. All these cases failed to be walled off, except case No. 2 which had been sick 6 days, because of this variation and because the omentum was too short, small, and thin to wrap around the focus. All the patients over 6 years of age gave the history of early pain at the umbilical region, due to the superior mesenteric plexus of Meissner and Auerbach.

Appendicitis in young children is a different condition from appendicitis in adolescence and in adults. It is not rare in childhood. Although the greater liability of the male sex to appendicitis is as conspicuous in children as in later life, the proportion being 2 to 1, the prognosis in girls is distinctly more uncertain than in boys. Therefore, the statistics relative to the mortality rate of appendicitis in the young are of no value.

The different pathologic types of the disease—catarrhal, suppurative, and gangrenous—can not always be differentiated clinically; they are so often atypical.



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Each member of the State Society is entitled to receive a copy of the JOURNAL every month. Any member failing to receive the paper will confer a favor by notifying the Chairman of the Publication Committee of the fact.

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## WORK OF THE SOCIETY.

Those members who did not, or could not, avail themselves of the privilege of attending the Annual Convention of the State Society at Atlantic City should read carefully the detailed "Transactions" issued as a supplement to the August Journal.

It is impossible to present a satisfactory monthly statement of the work being done throughout the year by your officers and committees, and this annual presentation of detailed reports of their activities is about the only way in which you can be properly apprised of the character and vast amount of work being carried on by the Society. Each of you owes it to himself to become familiar with every phase of the Society's undertakings, and in these committee reports you will find complete explanations of what has been accomplished and is being planned for the future. There are very few state medical societies as progressive as this one of yours; very few with as good a record for past achievements and very few as actively engaged today in dealing with economic and social problems having a medical bearing. Familiarize yourselves with this work so that you may fully understand and thoroughly coöperate with the efforts of your associates in the organization.

In this connection, and showing that our work is extending beyond the geographic bounds of the state, we might call your attention to the summarized report of the third Tristate Medical Conference recently held in Philadelphia, which is published in this number of the Journal. As evidenced in the preceding conferences, the fact is further illustrated here that unity of action in medicole-

gal matters by the states of New York, Pennsylvania and New Jersey is very much to be desired and the efforts being made to bring about concerted and harmonious action over this territory should be encouraged. The results of these conferences to date have been beneficial beyond expectations and there is now an apparent promise that the continuance of such efforts will bring about an adjunct organization of considerable importance to each of these state societies.

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## CONTROL OF RABIES.

That rabies is becoming a real menace in this state is evidenced by the increasing frequency of newspaper items from various districts relating its occurrence, and now even more forcibly by the statistics furnished by the State Health Director for this issue of the Journal. It is a sad commentary on the intelligence of any community that it permits the continued existence of a disease that might so readily be banished.

It has been proved in some sections of this state, as well as in many other places, that vaccination of dogs renders the animals immune to the disease and thus accomplishes 2 most excellent objects: By rendering the animal immune, the possibility of spreading the disease is removed; the dog being usually the transfer agent by which the affection is transmitted from a rabid animal to the human. Knowledge of this fact is not held solely by laboratory scientists, nor even exclusively by members of the medical profession; it is in the possession of all reasonably well educated persons and has been made available to all reading people. And yet, there is little public

interest in application of this special knowledge, or worse still, there is actual opposition from supposedly intelligent individuals.

The State Department of Health had introduced into the last General Assembly an Act providing for compulsory vaccination of all dogs. The Committee on Public Health, of the House of Assembly, reported favorably upon this proposed legislation, but, when the Act came up for consideration and vote of the "representatives of the people", these "grave and reverend seigneurs" indulged in clownish revelry that would have been discreditable to any organization above the grade of hoodlums. Other attempts were made, at later sessions, to secure serious consideration of the proposed law, but without success; though one member related a sad personal experience with rabies—his wife and child having been bitten by a mad dog—the majority of his colleagues could not be moved to sufficient interest to even discuss the problem. There were present, on the floor and in the lobby, some active opponents of the Act—some self-styled "dog lovers".

On what basis do these deluded folk decide that they, and they only, are fond of dogs? Who truly loves animals best, the man who protects them against contraction of disease, or the man who insists on their running all the risks of contamination and refuse them the right to protection from disease that is known to be prevalent in the community? A certain percentage of all dogs that run at large, without protective immunization, will inevitably become infected. Then what happens? Even though the dog may not bite a person, the mere fact that it shows evidence of being "mad" usually leads to the innocently sick animal being shot or pitilessly stoned to death. Will any "dog lover" dare to say that such treatment of dogs—allowing them all to run the risk of a preventable disease and then ruthlessly murdering those that happen to become sick—is more humane, more kind and considerate, than vaccinating the dog to protect its health? We contend without fear of contradiction that the man who looks after the health of his dog is a far better "lover" of animals than the one who shows his love only by silly protestations.

If those who oppose antirabic vaccination

of dogs will not consider the saving of human life thereby to be effected, they should at least ponder upon the protection such vaccination affords their dogs.

### GROUP LIFE AND HEALTH INSURANCE.

There is a legal phrase often made part of a contract, and which might well apply to our consideration of the proposition for insuring the lives and health of members of the State Medical Society; i. e.: "Time is of the essence of this contract". As you were informed in the beginning, it is necessary to obtain the signatures of 75% of our members before we can secure the advantages of these very favorable offers of group insurance. It is highly important that these signatures be procured in the very near future, as neither the insurance companies nor the State Society committee will want the canvassing to drag along over a long period of time.

The propositions presented at the State Society meeting, and which were endorsed by vote of the House of Delegates, were published in the July Journal, page 356; a reprint of that special article was mailed to every member of the State Society by the Chairman of the Special Insurance Committee; it is probable that you have since been approached by that member of the committee who represents your county; so, it may be assumed that you have had the opportunity to become fully acquainted with these 2 propositions, the one for group life insurance, and the other for group accident and health insurance.

As we understand the proposition, any member of the Society who is more than 25 years of age can by this plan secure insurance on better terms than he can possibly get by direct personal dealing with any reputable insurance company. As far less than 25% of our members are below that age, it would seem that there should be no difficulty in obtaining the support of more than 75% for putting these plans into operation.

The important thing at the moment is that you give this question immediate and serious consideration and then, if you approve the plans and wish to benefit thereby, that you adopt the slogan "Do it now".

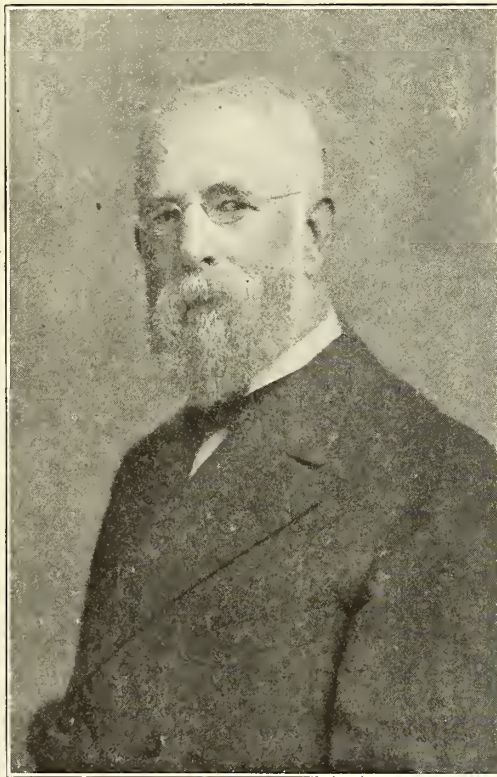


## In Memoriam

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BEST, George N., one of the most widely-known physicians of Hunterdon County and a scientist of international reputation, died at his home in Rosemont, N. J., on June 18, 1926, after a long period of suffering. In spite of great affliction he attended to his practice, making his daily rounds, until the fourteenth of last January. Since that time he had been confined to the house and most of the time to his room. He was in his eightieth year.

He is survived by his wife, Hannah W. Best, to whom he was married in 1877; by one brother, A. Lincoln Best, of Pittstown, N. J.; by one sister, Mrs.



Frances Robinson, widow of the late Elijah Robinson and mother of Freeholder George N. Robinson, and by several nieces.

Dr. Best was born at Round Valley, Hunterdon County, October 16, 1846. His father, Cornelius Best, was a farmer, who later removed to a farm above Pittstown, near King's Mills, where the boy "Newt" grew to manhood, spending his leisure hours, we are told, largely in hard study, and taking his recreation chiefly in finding out what the brooks and fields and forests of the vicinity had to teach him.

In 1866-67 he taught school at Sunnyside, and later in other nearby districts. He entered Lafayette College in the class of 1873, but did not complete the course. Leaving Lafayette, he enrolled in the Medical Department of the University of Pennsylvania, from which he was graduated in 1875, having meanwhile served one year as Professor of Natural Sciences and Mathematics in Rugby Academy, Wilmington, Del.

He began the practice of medicine in Røsemont, N. J., in 1875, soon after graduating, "intending to stay there only for a little while", as he smilingly declared on a recent occasion. Being asked why he changed his mind, he pondered for a moment and replied: "These people seemed to need me and I liked them. By the time I had thought to be leaving, I couldn't break away. So here I am, after more than fifty years."

To the suggestion that he might have had a much easier and more lucrative practice in some center of population he replied: "Yes—maybe so. But I felt that I was doing a little something worth while here, and my family—his patients were his family—appeared to think so too. I guess it is just as well."

Besides keeping up with progress in the practice of medicine, Dr. Best gave much attention to other scientific subjects, especially to botany. He had long been recognized both in this country and in Europe as an authority on the mosses. He was at one time President of the Sullivant Moss Chapter, the leading bryological society in the United States. He was for many years engaged with leading botanists in the preparation of the "Systematic Botany of North America".

Dr. Best has published "Revision of the North American Thuidiums", "Revision of the Cladodiums", "Revision of North American Pseudoleskias", "Revision of North American Herberelodiums", and papers on various medical subjects.

Among his own people Dr. Best was known as an old-time "country doctor", one whose advice and judgment on matters in general were always worthy of consideration; to the scientific world he was known as a painstaking scientist, one whose decision in the line of his specialty was the ruling of a court of competent jurisdiction. Mosses came to him for identification from great institutions of learning both of this country and of Europe. Some twenty years ago one specimen that had baffled all examiners finally came to Dr. Best. He spent months of his leisure time laboriously tracing out every known species of this and that family, declaring, "I can't afford to be wrong". After covering the whole field of Mosses as laid down by authorities, he reported that nothing like the specimen under consideration was known to science. His report was accepted as the last word on the matter. Some time later the savants named the specimen in honor of Dr. Best.



## County Medical Surveys

### MEDICAL SURVEY OF BERGEN COUNTY.

S. E. ARMSTRONG, M.D.,  
Rutherford, New Jersey.

Nature in the distribution of her largess, especially in handing out her opportunities calculated to encourage the advancement of knowledge in medicine, has been rather unkind to our profession in Bergen County. Instead of giving us an oasis surrounded by a desert, she has given us at least a partial desert surrounded by a number of oases. Because of shipping and other commercial advantages, New York, Jersey City, and Newark have grown to enormous proportions, and because of water power and other reasons of advantages of location, Paterson early became an attraction to settlers of this locality, thus leaving Bergen County a territory occupied by farmers with small villages springing up here and there without any special interests to give them impetus for rapid growth. Hence, in those early times medical talent such as it was—and it was by no means mediocre—had, comparatively speaking, but little material to feed upon. As another reason for the conditions then existing, add to this the fact that the people were mostly immigrants from Holland, or their direct descendants, a people both from habit and necessity more interested in clearing the land and developing the soil than in the founding of schools and colleges. We can readily understand that because of these influences working in the formative stage of a people's development, all the sciences, including medicine, suffered from forced neglect.

Dr. William L. Vroom, of Ridgewood, gives me the following information: "Dr. Van Emburg must have practiced in and about Hackensack before 1709, as a deed is filed that year to his widow. The next one of whom any account is found is Dr. Abraham Van Buskirk, who lived at Paramus and was surgeon in the First Militia of Bergen County, February 17, 1776. In July of that year the Provincial Congress ordered that the treasurer pay to Dr. Van Buskirk and 2 others, the sum of 335 pounds, 10 shillings, being the amount due on 79 stands of arms at 4 pounds, 10 shillings apiece, but before the year was out, he had gone over to the British bag and baggage. He was the leader of many Tory raids in Bergen County. One raid through Closter in 1779."

"Joseph Sacket, Jr. who practiced in Paramus, was one of the 17 who signed the In-

struments of Association and Constitution of the Medical Society of New Jersey in 1766."

"Dr. John T. De Mund was an assistant surgeon in the 58th Regular Pennsylvania Infantry in 1863. He came to Ridgewood in 1878 where he continued to practice his profession up to the year 1914."

"Dr. John B. Parker, surgeon of the Civil War, came to Ridgewood about 1876. He was founder of City Point Hospital, and it is related that President Grant said to him: 'Dr. Parker, if there is any position you wish, I would be glad to make the appointment.' The doctor, in his characteristic way answered: 'Thank you, Mr. President, I am a Democrat.'" Dr. Parker long treasured an axe with which President Lincoln split a rail in his tent one night at the earnest solicitation of a company of officers, just to demonstrate he had not lost his cunning in accomplishing that feat.

There were many more very worthy physicians in Bergen County during the early days, but space does not permit us to mention them at this time. The real renaissance in medical progress and learning began for Bergen County in the year 1888.

We quote: "In the early part of the year 1888 Dr. David St. John, a prominent physician of Hackensack, undertook the organization of a hospital to supply the local requirements for such an institution. His enthusiasm met with a ready response, resulting in a preliminary meeting held at the office of William M. Johnson, April 23, 1888. May 1, 1888, an organization was effected and the Hackensack Hospital Association was duly incorporated. A large plot of ground with a 10 room house on it was purchased at a cost of \$4000. After remodelling to suit its new purpose, it was thrown open to the public June 13, 1888.

"At about the same time, through the leadership of Mrs. Shephard Homans, Adelaide Stirling, Doctors J. A. Wells, Edward Clark and D. A. Currie, a quite universal sentiment was created in favor of the establishment of a hospital for Englewood and its neighboring towns; a suitable site was secured and a building erected by May 1, 1890, at a total cost of \$4684.63."

Thus the Hackensack General Hospital started on its career with 25 beds, and the Englewood General Hospital with approximately 20 beds, each in a fair way to give good service, but neither completely equipped.

Dr. Joseph Morrow, Superintendent of the Bergen County Hospital, in a communication to the writer of this article very aptly says: "For many years the need of a public hospital for communicable diseases was recognized by the physicians and many of the citi-

zens of Bergen County. Public sentiment, crystalized by The Bergen County Medical Society, caused the Board of Chosen Freeholders to adopt a definite program which resulted in the erection of the original hospital building in 1914."

This first unit of the present elaborate Bergen County Hospital was intended for the care and treatment of patients suffering from either scarlet fever or diphtheria; nevertheless, it was called into use during the infantile paralysis epidemic of 1916 until such time as this disease disappeared, then it was opened and devoted to its original purpose.

During the 3 or 4 years previous to this time, the Board of Freeholders had been making various efforts to secure a suitable site for the establishment of a hospital for the tuberculous, all of which proved to be abortive and some of them expensive, particularly the one at Alpine on the Hudson, at which place a large plot of ground with house was rented, and 15 or 20 patients treated for a brief period. After having exhausted every means to find a suitable location for the establishment of a hospital for tuberculosis, the Board of Chosen Freeholders, guided by a quite general public sentiment as well as the expressed opinion of the physicians of the county, sought and obtained approval of the State Board of Health for the erection of the tuberculosis unit on the land—that of the County Farm—then being partly used for the so-called "Isolation Hospital"; this being the second attempt, the first having been denied by the State Board. "Following this approval, the Board of Freeholders, pursuant to the recommendation of the Board of Managers, immediately began the erection of 2 additional buildings."

"In 1920 a sizable epidemic of smallpox" demandd the erection of a unit for the care of patients afflicted with that malady, and within 2 weeks a building was completed and put to use. Robinson Crusoe was never more completely isolated, and of course nothing like as well served.

"Plans were then prepared for the erection of a modern 100-bed tuberculosis infirmary, and the necessary recommendations were made to the Board of Chosen Freeholders in December, 1923. With a spirit of coöperation, new characteristics with that body, the Freeholders adopted these recommendations and decided to award the contract for construction of the new infirmary as soon as the specifications could be prepared."

Concurrent with this building operation, a Nurses' Home was constructed, furnishing accommodations for 50 people, and also tem-

porary quarters for the business administration.

Thus has been provided a hospital for communicable diseases, in all probability second to none in the State of New Jersey.

In 1920, notwithstanding that numerous additions and improvements had been made to the Hackensack Hospital, it was found that its capacity was greatly overtaxed, and erection of an entire new building was decided upon. Accordingly, steps were immediately taken to finance the enterprise and subscriptions to the extent of \$730,000 were secured. When completed and equipped, the new structure will cost approximately \$870,000. A similar statement applies with equal force to the Englewood Hospital, except that over \$1,000,000 was expended in the construction and equipment of its new building.

The Holy Name Hospital, under the auspices of the Sisters of St. Joseph's of Peace, was brought to its present state of completion and opened for the reception of patients, October 4, 1925. The institution is beautifully located in Teaneck on a 16-acre plot. The present building has a capacity of 172 beds, and was constructed and equipped at a cost of \$750,000. There is in contemplation an additional structure to house 300 beds, as well as a commodious building for the accommodation of nurses and help.

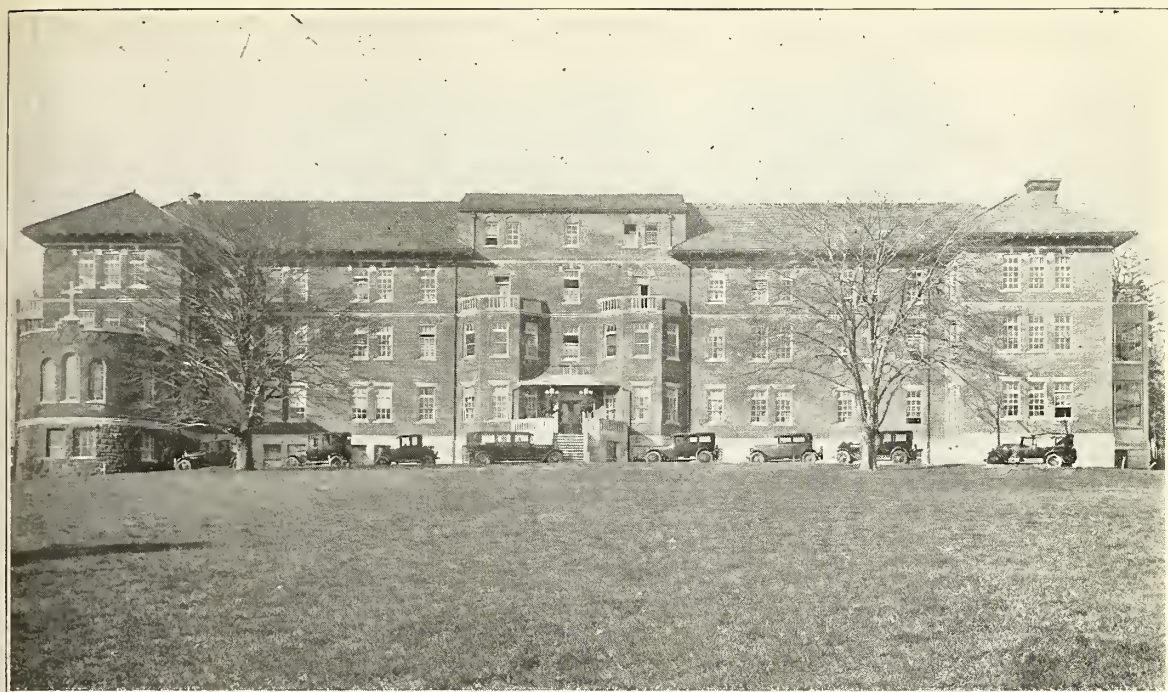
It is to be noted that Bergen County, in its early days having been a partial desert as formerly pointed out, and up to 1888 a county without a hospital bed, now has 3 general hospitals, with an aggregate bed capacity of 570, and 1 of 250 beds devoted to the treatment of communicable diseases; making a grand total of 820 beds at the disposal of its people, the present value of the entire properties being approximately \$4,750,000.

One wonders how so much money could have been accumulated for such a purpose. The answer is: A rapidly increasing population making the demand self-evident; a philanthropic spirit permeating the communities most concerned, so that men of large means gave largely and people of small means, including the women, being equally philanthropic; today all seem satisfied, not even the "poor taxpayer" finding the least fault.

What a magnificent sum for charity, and what an enormous responsibility it places on the other part of the machinery—the personnel, particularly the Medical Profession!

There are approximately 150 physicians connected with these hospitals in one capacity or another, who have, as their working tools, practically all of the modern implements, including x-ray laboratories as well equipped as those of metropolitan hospitals; the Engle-





Holy Name Hospital, Teaneck, N. J.

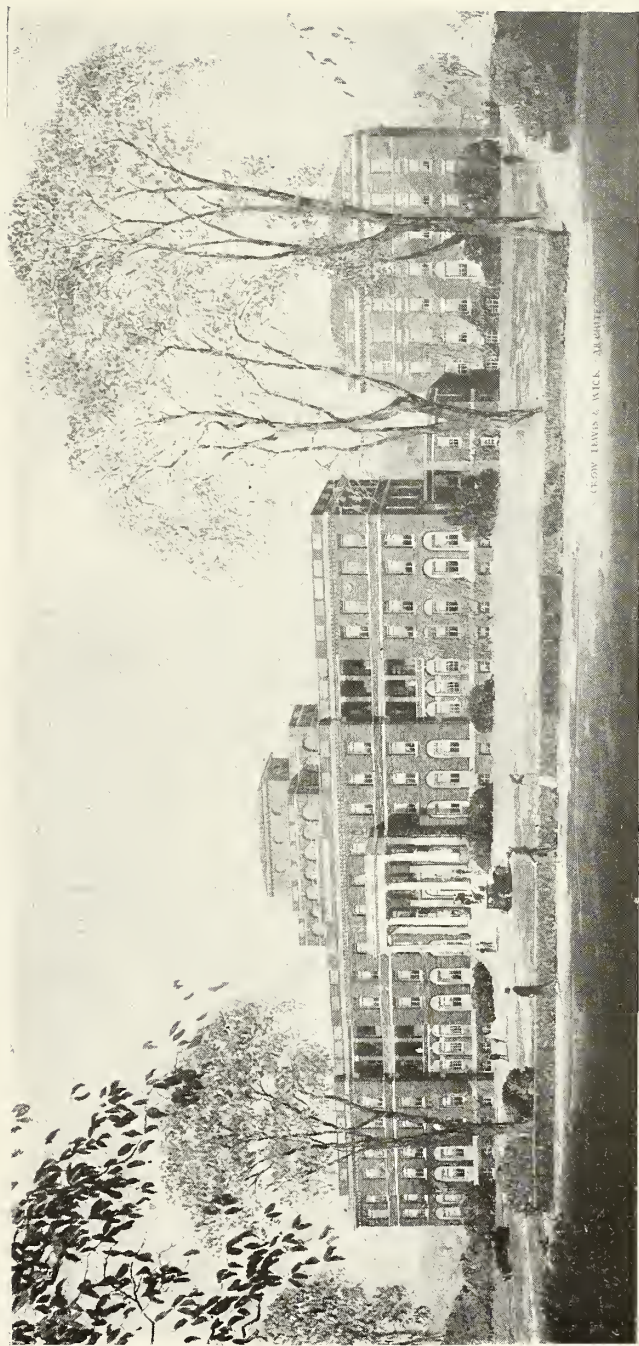


Operating Room, Holy Name Hospital, Teaneck, N. J.



Infirmery (A Tubercular Unit) Isolation Hospital, Bergen County, N. J.





Englewood Hospital, Englewood, N. J., (New Building at the Left)



New Building, Hackensack Hospital, Hackensack, N. J.



wood Hospital has among its diagnostic appliances a cardiograph "as good as the best".

Those "sentinels at the gate", the pathological laboratories, are first-class in equipment and personnel, and are well supplied with material. It can be said without hesitancy that the first thought in all these institutions is the best interest of the patients; the desire for advancement being such that the next thought is the acquirement of knowledge and its diffusion. Perhaps it is hardly necessary to say that numerous clinics are held throughout the county, the principal ones being those at the hospitals by members of the staff, and others at Hackensack, Englewood, Cliffside, Garfield, and Lodi, by Dr. Morrow of the County Hospital, in the interest of persons suspected of being tuberculous: at these clinics all patients found to have the disease are referred back to their family physician, if they have one, otherwise to a doctor of good reputation, before being received at the infirmary.

#### THE BERGEN COUNTY MEDICAL SOCIETY.

It has always been the policy of the Bergen County Medical Society to be interested in civic affairs. As an example: A few years previous to 1902 a company was formed and obtained control of our natural water supply. Some of our health boards became interested in the sanitary conditions of the water shed, and doctors connected with them, on making an investigation, found their suspicions justified. After much discussion with the company without satisfactory results, the matter was taken up by the society, and through grand jury presentment the company was induced to install a filtering plant and make other much needed improvements, so that a large part of the people in the lower Hackensack valley became served in a very satisfactory manner.

Having gone thus far in attempting to give a description of the hospitals and other things pertinent to our subject, I propose having a brief session with the doctors of my acquaintance during the past 40 years; in doing this I feel that I have always been and am now in the camp of my friends, and to love them all, one has only to exercise a little charity now and again. My observation has been that doctors are human. We know that the personal element enters into the composition of the minister, lawyer, farmer, and the rest; why should it not enter into the composition of the doctor? Those whom I first met in the society were the suave, alert St. John; Currie, the fighter for the right as he saw it; Nier, Zabriskie, and Haring, now living and past ninety—all gentle, sweet, and passive, and better than wholesome. These men were deeply interested in the Medical Society, and did much

for its betterment. They have all, except Haring, gone to their rest.

The men of a later date are certainly worthy and well qualified. If we attempt to present a list of them, it would be "as long as your arm", and even then we would probably be criticized for not making another as long as your other arm; however we may be pardoned if for specific reasons we mention a few of them.

No political post of great importance as far as I can learn has ever been held by any physician of Bergen County. Some years ago, William E. Ogden was elected to the State Assembly; he is now county physician. G. Howard McFadden held this office at one time, and the writer of this article succeeded him.

The following list gives name and rank of those doctors of Bergen County who were in the U. S. service during the Spanish-American and World Wars: The late Charles Francis Adams, Spanish-American War with rank of Major. In the World War: Lieutenant Colonels: William L. Vroom, overseas in hospital service; J. M. Teeter, assignment not known; J. B. Edwards, x-ray work in the United States; J. T. Wykoff, assignment not known. Majors: M. J. Sullivan, overseas in base hospital; Frank Freeland, overseas, regimental surgeon; Valentine Ruch, in United States with ambulance corps. Lieutenant: William S. McDonald, assignment not known. Lieutenant-Commander in the Navy: J. B. Lynn.

It will be seen by the foregoing that our County of Bergen stands in the front respecting every fine human endeavor, and that it will not be many years before it shall be recognized as an integral part of one of the world's greatest medical centers—that of New York.

## Esthetics

### THE FRUIT OF THE FAMILY TREE

(Continued from August Journal.)

#### What Education Tells.

"Wooden legs are not inherited, but wooden heads are." Up to the present time no incontestable case of the inheritance of an induced or acquired character has ever come forward, at least in the higher plants and animals. Broadly speaking, we can say, with just about as much certainty as we speak of gravitation, that what happens to parents during their lives, or what they do, has no appreciable influence in causing their children to be born either better or worse, brighter or more stupid,

weaker or stronger, wiser or more foolish. Biblical scholars agree that the quotation from the Hebrew prophets about the "sins of the fathers" refers not to heredity (about which they knew nothing) but to the penalties of criminal law, which punished not only the man who committed a crime but also his children and grandchildren.

### Prenatal Influences.

One instance where the father's sin is visited upon the children is in the case of syphilis which, however, is not inherited in the true sense of the word. Although the exact mechanical processes whereby a child is born with syphilis are not universally agreed upon, the weight of opinion leans toward the probability that the microbe first infects the mother and passes from her blood through the placenta to the child. The disease is thus transmitted as a congenital impairment but it is not due to defects in the germ-cells themselves. Hereditarily speaking, the sins of the father are visited upon the children when the fathers commit the one unpardonable biologic sin of marrying the sinful. Not even "the taste for drink" can be laid to inheritance, although lack of self-control may be inherited and fostered by wrong environment.

As evidence that educating or injuring the parents will not improve or injure the children we have the wonderful discovery, made about 30 years ago by August Weismann, that in the differentiation of cells in embryonic life the reproductive cells, or sex-cells, are set aside and take no further part in the life of the individual. They are isolated in appropriate organs and remain unchanged except that at maturity they increase enormously in numbers, and are then handed on in union with the reproductive cells from some other individual. Thus the germ-cells are much like coins carried in one's pocket. No amount of wishing or educating will change the five-cent piece to a dime.

If the foregoing seems pessimistic, the reader is asked to reflect upon the other side of the problem. Suppose that the effects of moral improvement and education were transmitted to the germ-cells and through them to children, then the lack of education would be likewise equally transmitted. Parents of the dark ages or of pioneer days, who had no chance to get an education, would have only feeble-minded and reckless children. The obvious truth is that the work of heredity done once lasts until the stock commits the unforgivable sin of marrying lower and meaner stock, but the work of environment has to be done over and over again for each generation.

Education and environment are then vital factors to the extent that they so largely determine who shall marry whom, and thus what characters of body and mind are preserved in the race.

The logical difficulty remains that unless new characters appeared from some cause we would have no evolution. This can never be solved until someone proves beyond debate that he has induced a new character or has discovered how nature does it, since it is impossible to prove a universal negative. It must also be borne in mind that many characters which have been thought to be new have been found to be merely a reshuffling of Mendelian factors already present in the germ plasma.

All these considerations lift education, sympathy, public health, charity and all the measures for human improvement into new importance. The ideals of human excellence which we teach our young men and women are sought in their mates and thus become the indestructible inheritance of the race. The environmental enthusiasts and the hereditarian enthusiasts can thus cooperate in a great racial program.

### WHAT PRENATAL INFLUENCE TELLS.

At this point the reviewer interrupts what has been an almost continuous abstract of Wiggam's subject matter to remark that the two chapters under this heading would probably bring very little grist to the mill of the medical man. They would, however, afford him no end of enjoyment with their caustic and witty refutation of certain literature and tenets, ancient and modern. The author hopes that the truth on this subject will ultimately reach and comfort thousands of mothers who are wrecking their nerves in fear of birthmarks, or breaking their hearts in the thought that they, by some neglect, have caused a child to be born with an imperfect body or mind. For they had no more to do with it than the man in the moon.

### TWINS.

Twins hold many secrets of psychology and the biology of heredity. Scientists have been looking into their faces for ages trying to decipher these mysteries. Some twins look so nearly alike that their own mothers cannot tell them apart. But the interesting point is that in their mental and moral make-up and in their emotional reactions under the same circumstances, twins are as similar as they are in physical appearance. This is true of what are known as "identical" or "duplicate" twins. They are always of the same sex and are believed to have been born from the same germ-cell. Then again there are other twins ("fra-



ternal twins") who seem so dissimilar that no one would suspect they were even brother and sister. It seems that in the United States about one birth in 90 results in twins. In about 2 cases out of 5 the twins are of the same sex, but only in about one case in 3 are they identical.

Many students believe that the tendency to produce twins is usually an inherited one, but just precisely how the tendency is transmitted, whether it is a recessive or a dominant, whether it comes through the father or mother or both, has not yet been worked out.

Sir Francis Galton, the founder of the science of eugenics, was the first man to apply careful methods to the study of twins. He collected the histories of 80 pairs. In the cases of identical twins all ran about the same, their natures remaining the same under varying circumstances. Dissimilar twins, however, often showed almost opposite reactions to the same environment. (This seems to be the gist of pretty strong evidence in favor of heredity in the heredity vs. environment case. However, parents quoted from the author's own collection, and the narrative of the author's own interviews with twins are as much the despair of the reviewer in these two chapters as they would be the joy of the reader.)

#### WHAT COUSIN MARRIAGES TELL ABOUT HEREDITY.

Cousin marriages—where is the medical man whose advice has not repeatedly been sought on this question? On the one hand stand those disastrous results from such unions—defectives, several or more of whom are known to almost everyone. On the other hand stand such distinguished personages as the four sons of Charles Darwin (who married his cousin) whose names are "ornaments to the scientific history of England; also the famous Cleopatra, whose ancestry shows the highest inbreeding in human history without ill results, and who, "notwithstanding her personal vices, was a woman not only of wonderful beauty, but of great intellectual powers." Several cousin marriages appear in the pedigrees of the Bach, the Harrison and Kemble families with no obvious injury. Although 25 years ago these apparently conflicting results were an enigma, careful and extensive experimentation in cross-breeding and inbreeding has solved the mystery. It is this: Many persons carry in a portion of their reproductive cells defects of which they themselves are ignorant. Therefore, two cousins, since they had a common ancestry, would be more likely to be carrying the same defect, in which case a portion of the children would show the defect in full force. Some would be free. Professor

East has calculated that if the same defect has not appeared in both sides within 3 generations it is as safe for cousins to marry each other as to marry into an outside family. It should also be noted that in experimental animals, where the stock has been sound, inbreeding of the best pairs of each generation has produced increasingly fine individuals. "It is a pity", says the author, "that the human family does not follow the breeder's practice and throw out all defectives from parenthood, whether cousins or unrelated..... Our saving of the weaklings is one of the true glories of our civilization; but if we permit those whom we have saved to marry freely, we are extremely likely to make individual improvements not the ally.... but the greatest enemy of race improvement.... Disease is inherited; but health is also inherited. There are in the human germ-cells probably a hundred times as many health factors as disease factors. It is not too great a task for human intelligence to eliminate the disease factors and preserve the health factors. We can have a sound, happy, beautiful race if we really want it."

#### IS BRAIN POWER INHERITED?

It seems that it lies within the power of the human race to endow itself with mentality since science has found out that brains are largely a family affair; that some families furnish numerous children with a high order of brain power, while other lines of blood would not produce a really intelligent individual in 100 years; that where the ancestry is of mixed breeds, children of energy, character and high grade mentality may appear in the same family as those of reckless, intemperate and stupid qualities. Science has also long ago established these facts: that half the great men and women of the world were either born from great ancestry or left great descendants; that the children of great men are practically always remarkable provided the father married a woman of mental attainment or of great ancestry; that practically all of the remaining half of the great men and women of history have been born of ancestors of sound ability and character. The important fact is also to be noted that about 1% of the world's population has produced one half the world's great leaders, while it has taken all the countless millions of people of ordinary blood to produce the other half.

#### MEASURING HEREDITY IN ROYALTY.

That the royal families of Europe, during the monarchical period there, easily led the world in the production of men of high order of character and talent, particularly in the fields of statesmanship and war, may come as

a surprise to many 100% Americans who have been perhaps too ready to believe that royal blood was also tainted blood. It is true that just at the moment there seems to be no outstanding genius, but we have 'fallen upon democratic times when the two talents in which these persons have excelled in times past are not the vital interests of the nations. Royalty still constitutes, however, a vast family of about 2000 interrelated individuals of more than the average of intelligence, personal beauty and character. Going back beyond the living members of these families, an estimate of whose qualities can not be exact, Frederick Adams Woods has made an epochal study in his book, *Mental and Moral Heredity in Royalty*, of over 600 individuals, starting with Edward VII and including all his ancestors to 4 generations, then all the other descendants of these ancestors, all their wives and their ancestors, including pretty completely England, Germany, France, the Netherlands, Spain, Portugal, Austria, Italy, Russia, Denmark and Sweden. The period covered extends in general back to about the sixteenth century, but in the case of Spain and Portugal to the eleventh century.

Woods arranged all these characters in two separate scales, one for morals and one for intellect. As a basis for judging whether an individual was great or commonplace, good or bad, wise or foolish, he averaged up all the adjectives used by historians in describing their character and achievements, finding a quite general agreement as to essentials. While the purpose of Woods' work was not to compare royalty in ability and morals with mankind in general, but to compare the members of all these families with one another, the investigator is finally and inevitably led to a comparison of the incidence of genius among those of royal and nonroyal blood. Woods showed in *Heredity in Royalty* that out of about 800 persons of royal lineage there were about 20 men of genius, as agreed by all historians. Now in J. McKeen Cattell's list of the 1000 most eminent men of all time, not more than 200 men of such unquestioned genius appear in any of the nations during their entire history. Since these countries had millions of inhabitants, the chances of inborn genius are several hundred thousand times in favor of royalty. The reader's natural comment at this point is met by the reminder that everywhere environment has been found to be of slight influence in producing men of fame. Although royalty was drawn from one family numbering at most a few thousand, and the statesmen of modern Europe came from millions of people, the total number of great statesmen was less than the number of great

royalty. And the nonroyal generals, according to our author, fell far below royal generals in the number of their successes.

"No man of imagination can read this wonderful research without many deep reflections. It shows that in times past great human strains have been built up and have grasped the destiny of the world in their hands. Such breeds will, beyond question, be built up again. Indeed, with our new knowledge of heredity, it does not pass belief that the nation which first applies eugenics to founding great families may, by sheer force of the character and intellect of its leadership, rule the world".

#### CAN WE MAKE THE RACE MORE BEAUTIFUL.

Turning again to humanity in the mass, the author devotes a chapter to beauty, which, he says, is all a question of ideals. We can breed the race forward or backward, up or down. There is much evidence in portraits (as illustrated by pictures accompanying the text) that the fundamental types of beauty and the personal appearance of the upper classes of northern Europe and America have undergone great changes within the past few centuries. Woods is quoted as having said, in commenting on this phenomenon, that while about the year 1500, the heavy bovine aspect was almost universal among northern painters, the type became less and less frequent until in portrait work done between 1800 and 1900 it is as difficult to find one of the old heavily built faces as it is to find a Greek or modern type among those back in the fifteenth and sixteenth centuries. The relative proportions of the old and new type of faces have been reversed. To explain this genuine evolution in a whole race of human beings two theories are advanced. According to Woods:

"It may have been due to some correlation between the evolution of intelligence and the evolution of finer and more exquisite physical organization, probably under control of the ductless glands. Beauty and intelligence are probably linked together in the very inner processes of the evolution of organic life. Beauty practically always accompanies economy of structure and movement, indeed is to some extent the expression of this economy."

Woods has also made the suggestion that the immediate cause may have been the spread of Greek art and its ideals over the Nordic race, which followed the Renaissance in Italy. It is quite possible, he thinks, that this led educated men to admire and select the Greek type of women, thus perpetuating this ideal in their descendants. On the other hand, the women admired and selected for wives by the farmers in East Prussia are those built like a draft horse and good for hard labor. Thousands of these women have been unloaded at Ellis Island. They are broad-hipped, short,



stout-legged with big feet, broad-backed flat-chested, with necks like a prize fighter and with faces expressionless and devoid of beauty.

"When we reflect that these women are giving us nearly 3 babies where the beautiful women of the old American stocks are giving us one, it does not take a prophet to predict that the beauty of the American women will steadily decline."

Yet we can have any kind of a race that we want, if we will give our artists and educators a chance to guide our ideals of marriage selection. For like everything else in the human race, it all depends upon who marries whom.

(To be continued.)

## Medical Ethics

### A BRIEF HISTORY OF MEDICAL ETHICS.

(An article from the pen of the late George F. Keiper, M.D., of Lafayette, Indiana, as published in the *Journal of Indiana State Medical Association*, June, 1926, page 221).

The medical profession has been the butt of ridicule at times because of our former "Code of Ethics" and our now revised "Principles of Ethics." Folks can not understand our attitude in regard to the practice of medicine. First of all, let me say that we are altruistic and not egotistic in our efforts to bring comfort and happiness to suffering humanity. We think not of self. Our motto is service above self, and hence we venture where the laity is afraid; nay, rather forbidden to enter in the care of virulent contagion. We are not the only ones who have a code, or "Principles of Ethics." The lawyers have theirs. In 1852 the pharmacists formulated theirs, just six years after our own was first projected. Our dental confrères have a very fine brief one. Outside of professional lines we find that the United Typothetae, the printers, formulated one in 1891; the United Confectioners' Association in 1901; the National Food Brokers' Association in 1904.

Recently a number of dinner clubs have been organized, the Rotarians, Kiwanians, Optimists, Lions, Exchanges, Altrusians, and such, and each apparently has its "Code of Ethics." So medical practice has pioneered in this matter for all the professions and other lines of business.

According to Webster, "Ethics is the science of moral duty," or more broadly, "The science of the ideal human character."

The word comes from the Greek, meaning character.

From the earliest dawn of human life on earth, moral relationships were recognized. Our first parents were born innocent but ignorant, and they recognized their obligations to the surroundings in which they were placed.

The first brothers recognized them. Each had learned to protect the other and when the younger brother was slain by his older brother, his reply to the searching question as to the whereabouts of Abel is, "Am I my brother's keeper?" in which reply he admits he is.

The study of ethics at this very moment is pursued in our colleges and universities by thousands of young men and women. It seems that our fathers were fortunate in prefixing the word "medical" to ethics, for the broad principles of ethics in general are lost sight of, if possible, and delimit us in our relationship to each other professionally and to the community in general.

But ethics, after all, is more than a science. It is a philosophy for "Philosophy is a process of reflection upon presuppositions involved in unreflective thought." "Man is distinguished from other animals by his appetite for tranquil association with his fellows. His tendency is to act on general principles."

The great question which the medical profession faces is this: "Shall our ethics be egotistic (i. e. to benefit ourselves only), or shall they be altruistic (i. e. for the good we may do others)? The medical profession takes the latter attitude for service as the dominant note in all our work to relieve the sick suffering, no matter how dark the night or inclement the weather. So much given to this idea were our forebears that they would present no bills for service rendered patients. We passed that period long ago because the average doctor did not receive an adequate and a decent living, recognizing after all that the servant is worthy of his hire. But the same professional conscience still lives as to our relationships with each other and with the world at large.

A historical review of this subject is most interesting. It is necessary to appreciate the present situation in medical or professional ethics. The philosophy began crudely. But as mankind broadened the boundary of commercial relations, his ethical relations correspondingly broadened.

The beginnings of medicine are involved in myth. The ancient Greeks in a beautiful poetic way peopled Mount Olympus with a

company of gods and goddesses, super-men and women, as it were. The presiding genius was Zeus, the Roman Jupiter. The poet Homer is largely responsible for this system of theology. The gods and goddesses had all the frailties and passions of mortals living below. Disease overtook them and Apollo was their physician. He possessed the powers to produce deadly pestilences, for in whatever direction he hurled his poisoned arrows, there plagues arose. When the people prayed for remission he would send Chiron, the centaur, half man and half horse, to stay the progress of the epidemics. Apollo instructed Chiron in the details of the healing art. Apollo came down to earth for his wife and married Coronis, the daughter of a Thessalonian prince, and she lived afterwards with Apollo on the heights of Olympus. To this union was born Aesculapius, the Asclepius of the Greeks. He was instructed by Chiron, the centaur, to be a physician. Though born a god, he had a human heart given him by his mother. As he roamed the heights of Olympus, looking down upon the earth, mankind was sick and suffering. So he left Olympus to dwell with men, to heal them of their infirmities. He married Epione and they had two sons and two daughters, Hygeia and Panacea. Panacea gathered the herbs from which her father made medicine to heal the sick. Her sister, however, concluded that she would devote her time to teaching people, not how to get well, but how to keep well. She was convinced that, after all, human suffering was due to ignorance. So well did she succeed that she pretty nearly put her father out of business. Nevertheless, Pluto, god of Hades, noticed that the number of arrivals at his domain was gradually diminishing. He hastened to Zeus and made complaint that Aesculapius was depopulating hell, for what was the use of having a perfectly good hell with no one to live in it. Zeus was convinced, and he hurled one of his thunder bolts at Aesculapius, which disabled the old man. Ever afterward he was compelled on his rounds of mercy to use a stick, or rod, around which was entwined a serpent, emblematical of wisdom. He soon learned to raise the dead. Pluto, looking across the river Styx, beheld strange sights. Folks about to embark for his realm were turning back to earth. The boat was carrying passengers both ways. Hell was being depopulated. In great dismay he hastened to Olympus and made complaint to Zeus. Zeus hurled another thunderbolt at Aesculapius, which killed the old man. But his spirit still abides.

This legend is given that we may understand the references in the earliest ancient Greek code of medical morals.

The earliest known code is that of Hammurabi, King of Babylon, who reigned 2500 years before Christ, i. e., before the days of Abraham. This king is mentioned in Genesis under the name of Amraphel.

The code was chiseled upon a monument of black dionite eight feet high. It was discovered in December, 1901, and January, 1902, at the acropolis of Susa by an expedition headed by Director General DeMorgan, and sponsored by the French government. It was found in three pieces which were easily fitted together to form the complete monument. At the top of one of the sides is a bas relief of the king receiving the code from the sun god. There are sixteen columns of text, four and a half of which is epilogue reciting the achievement of the monarch. He was a busy king, apparently. He conquered all opposing nations and was a god-fearing man and pious.

On the reverse side are twenty-eight columns of which four are the epilogue. In all there were 2540 lines of writing; 1114 remain. The rest were cut off by the Elamitic conqueror.

Several of the paragraphs relating to medicine are quoted, taking Harper's text:

196. If a man destroy the eye of another man, they shall destroy his eye.

198. If one destroys the eye of a freeman, or break the bones of a freeman, he shall pay one manna of silver.

199. If one destroys of a man's slave, or break a bone of a man's slave, he shall pay one-half this price.

215. If a physician operate on a man for a severe wound (or make a severe wound on a man) with a bronze lancet and save the man's life, or if he open abscess (in the eye of a man) with a bronze lancet and save that man's eye, he shall receive ten shekels of silver (as his fee).

216. If he be a freeman, he shall receive five shekels.

217. If it be a man's slave, the owner shall give two shekels of silver to the physician.

218. If a physician operate on a man for a severe wound with a bronze lancet and cause the man's death, or open an abscess (in the eye) of a man and destroy the man's eye, they shall cut off his fingers.

219. If a physician operate on a slave for a severe wound with a bronze lancet and cause his death he shall restore a slave of equal value.

220. If he open an abscess in his eye with a bronze lancet and destroy his eye, he shall



pay silver to the extent of one-half his price.

221. If a physician set a broken bone for a man or cure his diseased bowels, the patient shall give five shekels of silver to the physician.

222. If he be a freeman he shall give three shekels.

223. If it be a man's slave the owner of the slave shall give two shekels of silver to the physician.

224. If a cow doctor or a sheep doctor has treated a cow or a sheep for a severe wound and cured it, the owner of the cow or sheep shall give one-sixth of a shekel of silver to the doctor as his fee.

The Papyrus of Ebers is often referred to in elucidating ancient Egyptian medicine. The Egyptians had specialism specialized and specialists galore as a result. As many as thirty different physicians might be necessary to treat a single patient; the sick were visited in their own homes by the physicians. The latter were called through the president of the temple and he could send the ones needed in the case. All this was 1500 years before Christ.

Herodotus writes "One treats only the diseases of the eye, another those of the head, the teeth, the abdomen and the internal organs".

It was about this time that the great law giver, Moses, appeared on the scene to rescue the bitterly persecuted Hebrews from bondage. One cannot read the first four books of the Old Testament and then the work entitled "The Son of Amos", without having a huge amount of respect for his learning and condition in the matter of medicine and sanitation. The works of Flavius Josephus also bear like testimony. Permit me to quote from Neuburger's History of Medicine: "The commands concern the prophylaxis and suppression of epidemics, suppression of venereal disease and prostitution. Care of the skin, baths, food, housing and clothing, regulation of labor and sexual life, discipline of the people, etc. Many of these commands, such as Sabbath rest, circumcision, laws concerning food (interdiction of blood and pork), measures concerning menstruation and lying-in women and those suffering with gonorrhea, isolation of lepers and hygiene of the camp, are in view of the conditions of the climate surprisingly rational.

We now come to the time of Greek medicine. Greece was the center of culture of the world for a long time about 700 B. C. to the time of the Roman conquest. Livingston, in his book "The Greek Genius and Its Meaning to Us", tells us this. "Europe has nearly

4,000,000 square miles; Lancashire has 700; Attica has 700. Yet this tiny country has given us art, which we, with it and all the world has done since it for models, have equaled perhaps, but have not surpassed. It has given us the staple of our vocabulary in every domain of thought and knowledge. Politics, tyranny, democracy, anarchism, philosophy, physiology, genealogy and history—these are Greek words. It has seized and up to the present day kept hold of our higher education. It has exercised an un-failing fascination, even on minds alien or hostile. Rome took her culture thence. Young Romans completed their education in the Greek schools. . . . And so it was with nature less akin to Greece than the Roman. St. Paul, a Hebrew of the Hebrews, who called the wisdom of the Greeks foolishness, drawn to their Arcopagus and found himself accommodating his gospel to the style, and quoting verses from the poets of this alien race. After him the church, which was born to protest against Hellenism, translated its dogmas into the language of Greek thought and finally crystallized them in the philosophy of Aristotle. (Osler's Evolution of Modern Medicine.)

Who then were some of these luminaries in the field above mentioned? They were Pericles, the statesman, whose funeral oration over the heroes of Marathon is the hardest piece of Greek to translate, as many a student of Greek will emphatically avow.

Poets there were in Pindar, Euripides, Aeschylus, Sophocles and Aristophanes.

There were philosophers in Socrates, Plato and Xenophon, who wrote also the Anabasis.

History had its birth in Herodotus and sculpture in Phidias.

This was the environment in which was to arise the father of medicine, the great Hippocrates, for all these were his contemporaries in the golden age of Greece.

Is it any wonder then that he should write:

"(1) Medicine is of all arts the most noble, but owing to the ignorance of those who practice it, and of those who inconsiderately form a judgment of them, it is at present far behind the other arts. Their mistake appears to me to arise principally from this, that in the cities there is no punishment connected with the practice of medicine (and with it alone) except disgrace, and that does not hurt those who are familiar with it. Such persons are like the figures which are introduced in tragedies, for they have the shape, and dress, and personal appearances of an actor, but are not actors; so also are

many physicians in title but very few in reality.

"(2) Whoever is to acquire a competent knowledge of medicine ought to be possessed of the following advantages: a natural disposition; instruction; a favorable position for the study; early tuition; love of labor; leisure. First of all a natural talent is required, for when nature opposes, everything else is in vain; but when nature leads the way to what is most excellent, instruction in the art takes place, which the student must try to appropriate to himself by reflection, becoming an early pupil in a place well adapted for instruction. He must also bring to the task a love of labor and perseverance, so that the instruction, taking root, may bring forth proper and abundant fruits.

"(3) Instruction in medicine is like the culture of the productions of the earth. For our natural disposition is, as it were, the soil; the tenets of our teacher are, as it were, the seed; instruction in youth is like the planting of the seed in the ground at the proper season; the place where the instruction is communicated is like the food imparted to vegetables by the atmosphere; diligent study is like the cultivation of the fields and it is time which imparts strength to all things and brings them to maturity.

"(4) Having brought all these requisites to the study of medicine and having acquired a true knowledge of it, we shall thus in traveling through the cities be esteemed physicians, not only in name, but in reality. But inexperience is a bad treasure, and a bad friend to those who possess it, whether in opinion or reality, being devoid of self-reliance and contentedness and the reverse of both, timidity and audacity. For timidity betrays a want of powers, and audacity a want of skill. There are, indeed, two things, knowledge and opinion, of which the one makes the possessor really to know, the other to be ignorant.

"(5) Those things which are sacred are to be imparted only to sacred persons; and it is not lawful to impart them to the profane till they have been initiated in the mysteries of the science."

Smithies says: "This describes the social, educational, and personal qualities which go to make the ideal physician and no composition so tersely or so correctly exhibits the layman's weakness to judgment as exercise towards medical men."

How modern this statement appears in view of the vagaries seen on every side today, in the cults that seek competition with the legitimate practice of scientific medicine. Never was a more dignified protest

offered to all such practices. But human nature has not changed evidently, for though we have advanced very far in scientific research and invention in the 2500 years, yet the heart of man is as perverse as it was then. Unfortunately all the progress made has been the result of the efforts of rather a small minority for it is a startling fact that even today in this enlightened age but 10% in any profession, especially medicine, are the workers producing the things worth while. Would that all physicians were as zealous as the 10%.

Whatever reform has taken place in the practice of medicine has always come from the inside of the profession and not from the outside. We always wash our own dirty linen, sometimes unwisely in the public gaze, but mostly out of sight. Therefore, let us appropriate to ourselves the statements of the law of Hippocrates, bringing them down to the conditions as they now exist among us. We all make mistakes. The most successful man is not the one who makes no mistakes but the one who makes the fewest mistakes.

The law is taken from the genuine works of Hippocrates, a copy of which is in our public library, a perusal of which by all will be profitable if not edifying. The eloquent Patrick Henry before the Virginia House of Delegates, prior to the American Revolution, gave forth the "I have but one lamp by which my feet are guided, and that is the lamp of experience". Let us therefore examine the experiences of the authorities of the past as a proper guide for our conduct, present and future.

To this very day, medical students here and there take the oath of Hippocrates:

"I swear by Apollo, the physician, and Aesculapius, and Health and All Heal, and all the gods and goddesses, that according to my ability and judgment, I will keep this oath and stipulation. To reckon him who taught me this art, equally dear to me as my parents.

"To share my substance with my fellow practitioners and to relieve his necessities if required; to regard his offspring on the same footing as my own brothers, and teach them this art if they should wish to learn it, without fee or stipulation, and by precept, lecture and every other mode of instruction, impart a knowledge of the art to my own sons and those of our teachers and to disciples bound by a stipulation and oath, according to the law of medicine, but to none others.

"I will follow that system of regimen which according to our ability and judgment,



I consider for the benefit of my patients, and abstain from whatever is deleterious and mischievous.

"I will give no deadly medicine to anyone if asked, nor suggest any such counsel, and in like manner I will not give to a woman a pessary to produce abortion.

"With purity and with holiness I will pass my life and practice my art. I will not cut a person who is suffering with a stone, but will leave this to be done by practitioners of this work. Into whatever houses I enter I will go into them for the benefit of the sick and will abstain from every voluntary act of mischief, and corruption; and further, from the seduction of females or males, bond or free.

"Whatever in connection with my professional practice, or not in connection with it, I may see or hear in the lives of men which ought not to be spoken about I will not divulge, as reckoning that all such should be kept secret.

"While I continue to keep this oath unviolated, may it be granted to me to enjoy life and the practice of the art, respected by all men at all times, but should I transgress and violate this oath, may the reverse be my lot."

Each paragraph may well be text for a sermon on service, which has its origin from on high; for the legend of Aesculapius is nothing more or less than the attempts of the enlightened ancients in beautiful poetic fashion to tell us that the healing art is from on high; the gods came down to earth to heal the sick, and that all physicians are indeed akin to divinity. That is putting the practice of the healing art on a very high plane and with that sublime concept in view, is it any wonder that the father of medicine should write the oath he did?

In obedience to its precepts we find physicians everywhere referring with affectionate regard to their teachers of student days and to those of post student days, upon whose advice they rely. The young man should seek the counsel of the elders in the profession that he may avoid the pitfalls into which others have stumbled. Experience is an expensive teacher. A great deal of the expense may just as well be avoided.

We are brothers in the art, and it is wise in writing letters to our brother practitioners to put the postscript "Very fraternally" above our signature. We are to live clean lives, observing all the laws of God and man. "Thou shalt not kill" of the moral code is certainly paraphrased here, not only

to the living, but to the living yet unborn.

The father of medicine regarded the field of medicine and surgery too wide to be compassed by any one individual and recommended special surgery to those especially qualified to do it. But what of medical and surgical practice of today? If we could not compass the meager knowledge then extant, how can we be competent in all that is known now? Pardon me when I speak of my own specialty, alone. Over 20,000 pages of its literature appear each year. It is a high task to read it all intelligently.

Service above self has always been the motto of the profession, ages long before Rotary clubs came into existence. We regard not ourselves but others' welfare as paramount. We see oftentimes the seamy side of life. We see skeletons in family closets, obscured to other eyes, but we never divulge to a gossiping world the troubles into which these ugly accusers plunge their victims. Over all the sins of omission and commission of frail humanity we throw the mantle of charity.

To all who will thus practice the healing art, no fear shall be existent of an adequate financial support, and a competency against old age and its infirmities.

Upon the walls of our waiting room let us display the oath of Hippocrates that our clientele may read it for their own edification and inspiration. But never hang there the law. That should be hung in the sanctorum sanctorum of our offices, for that is for our own private frequent perusal.

The oath of Hippocrates was the system of ethics for the profession of medicine until the year 1803. It held undisputed sway.

But 500 years after the father of medicine held sway, the Great Physician appeared, and He, too, from on high, from the very courts of heaven itself. Divinity indeed came down to earth this time. He was no mythical person. We have the abundant proof of His ministrations in healing the sick and cleansing the leper, and in raising the dead. He, too, gave us precepts, the sum of which is, "Whatsoever ye would that men do to you, do ye likewise unto them".

Rabbi Hillel the elder, a contemporary of Jesus, was asked by a scoffing irreligious libertine, to express all the teachings of God in a space of time no longer than one could endure bearing up the weight of his body on one leg. "Certainly", said he, "here it is, all of it—'Love thy neighbor as thyself', all the rest is commentary".

(To be continued.)

## Lay Mirror Reflections

### NEWARK HELPING IN DIPHTHERIA DEFEAT.

Apropos of our recent references to a possible state-wide campaign for the abolition of Diphtheria, we were pleased to notice an editorial in the Newark Evening News of June 30, referring to the activity of that city's Board of Health:

Decision to open in the Department of Health a clinic for Schick testing and diphtheria immunization is a step forward. It should aid the progress already made here, as elsewhere, in eliminating a disease which experience has shown to be eradicable.

"To those who watched the sesquicentennial parade of public and parochial school children the other day, the banner displayed by St. Bridget's School must have stood out in memory. They blazoned the fact that this Newark school is ninety-nine per cent Schick tested, a record which, according to Health Officer Craster, is not exceeded in the United States.

"Newark's confidence in preventive medicine is not new. It was only three years after the discovery of diphtheria antitoxin, as long memories will recall, that in 1894 the city established its own laboratories for production of preventive serums, the first municipality to do so. A good habit then begun is still maintained.

"The Schick test is not compulsory in Newark, but it has made great progress. When it was inaugurated in 1920 as a school policy the diphtheria death rate was 14.9 per 100,000. By 1924 that had been reduced to 8.7. There were 1,022 officially reported diphtheria cases in 1920; only 575 in 1924.

"New York has immunized a million of its school children since 1920, and the death rate has fallen from 18 to 11 per 100,000, while cases have declined from 14,000 to 9000 a year. But there are much more remarkable records, such as Syracuse's cut in her diphtheria death rate from 45.6 to 2.6 per 100,000 in the years 1921-1925, Detroit's reduction from 34.5 to 9.7 and New Haven's drop from 14.4 to 1.7 in the same period. A California county—San Joaquin—had 51 deaths per 100,000 from diphtheria in 1921 and none last year, while Auburn, N. Y., cut hers in that period from 38.4 to zero, and New Haven's dropped 90 per cent in the five years.

"For the country as a whole, says Dr. Donald B. Armstrong in an article in *The American Journal of Public Health*, from which these figures are extracted, the registration area death rate from diphtheria declined in the period 1900 to 1925 from 43.3 per 100,000 to 12.1. Those twenty-five years cover the span from the general adoption of antitoxin for the stricken to that of Schick testing and toxin-antitoxin immunization for the well.

"Diphtheria, once the worst enemy of childhood and the terror of parents, has been conquered. We need only armor ourselves against it."

What Newark has done and is doing toward the elimination of diphtheria can be just as readily done by any other city or town in New

Jersey and that such action should be taken by every town is a statement that admits of no argument. Physicians can help by stimulating public interest and by aiding local health agencies to push the campaign.

### CHICAGO VERSUS QUACKS.

An officer of the State Society sends us the following clipping from that all-seeing weekly review—*Time*—which is quite enlightening as to what a city daily newspaper may accomplish when it sets out to expose the charlatans of its community.

In Chicago, the Tribune, big newspaper, did valuable work last week, as it did 13 years ago. It investigated the medical quacks, imposters, charlatans, "specialists", "old Docs", "health institutes" of the city, flayed them all and sundry, laid bare their foul and intricate inner workings. Chicago for a period was almost clean of these pseudo-medics, some of whom were regularly licensed physicians with debased practices. Many had been deprived of their onetime licenses for malpractice. Many were merely ponerastic laymen with a smattering of technical terminology. Of recent years they have been filtering back, spread-eagling their "specialties" on flamboyant office signs, advertising especially in the foreign language and Negro newspapers, greatly daring even to insert their advertisements in such English-speaking sheets as would accept their copy.

To learn how extensive Chicago quack operations were, the Tribune editors picked out a husky reporter, one F. . . . W. . . . 30 years old, 220 lb. in weight, 6 ft. 1 in. in height; had him examined by such highly reputed physicians as Dr. Louis E. Schmidt and Dr. Eugene Laurence Hartigan. They tapped him, sounded him, made Wassermann tests, pronounced him "an exceptionally healthy young man". Not so the charlatans. His reports on their personalities, their diagnoses and their cures he made unabashedly, and the Tribune bravely dealt with seven of them last week:

Old Doc S. E. Embry is a stoop-shouldered, middle-aged practitioner with greying hair. One-time, 1907-1908, he was intimately connected with government prosecution for using the mails to defraud against "The Boston Medical Institute" and "The Bellevue\* Medical Institute" of Chicago. These were one and the same firm, using the same office suite, but with entrances on different streets to divert suspicion, an oldtime quack stunt. Old Doc Embry uses the same method—"Dr. Embry" on the door of a squalid office for Negroes, "The Parker Health Institute" on a communicating office door for whites. His gyp game is to thrill and mystify the patient by the intimated cure-all powers of the x-ray. His staff found the Tribune man very ill, but curable for \$90, \$20 down.

Old Doc R. C. McCarthy, stocky, smooth faced, of medium height, heavy, spectacled and prematurely grey, sat looking at the patient, asked a few questions, declared he suffered from "prostatic trouble" curable by "electric treatment" for \$100, \$20 down. He operates the "House of Health", where in a demurely yet impressively equipped waiting room a buxom, black-eyed,

\*A scoundrelly echoing of the name of Manhattan's esteemed Bellevue Hospital.



black-haired demoiselle welcomes the "lobs". But they work for H. L. Giles and August E. Kroening, who syndicate their institutions with branches in Manhattan, Jersey City, Newark, N. J., Kansas City, Montreal and Detroit. They have been harried about the U. S. and Canada.

Old Doc John G. Gill, who is grey-haired, wears large round tortoise-shell glasses and constantly smokes a cigar, has long been able to find a "loss of manhood" in practically every visitor to his "People's Health Institute". "[My cure] is the same thing as gland transplantation." The reporter grabbed for his clothes. "You know what a ram is—a strong, virile, he-man sheep? Well, that's where this stuff comes from—from the ram. . . . He's red-blooded and full of fun. We inject a little of that spirit into you and the first thing you know you're a new man. . . ." He could "cure" the strapping reporter for \$150, \$50 down.

Old Doc W. M. Lawhon, dapper, trimly mustached and bearded, frankly admits his quackery when squeezed, but has always managed to blarney out of prosecution. He found the reporter's "manhood" seeping away through "prostathelecosis", which he certified to cure by means of "Y? 14", for \$40, \$6 down.

Old Doc L. D. Rogers is almost bald, about 65, flaccid, yet benevolent seeming. His cure-all is "autohemetic therapy", which is supposed to wake up sluggards and to perk up hang-dogs. He mixes a bit of the patient's blood with some Chipewewa water and squirts the solution back into the vein. Such ministrations the reporter managed to elude even against the reduced rate of \$100 for 16 treatments and a red paper-covered book thrown in.

Old Doc H. S. Whitney is a fat, large man, quite bald, with a ferret-like face ornamented by tortoise-shell pince-nez. He finds "autotoxemia" in his patients, found it in the reporter too, who also gravely suffered from "neurarchy with a basis of autotoxin". The treatment was to be "R 12 plus injections; static electricity and medicine", for \$46, \$3 down.

On the way from that place the reporter peeked into a cubicle where he got an idea of the electrical treatment. Before a nice, shiny, intricate-seeming machine that crackled and droned, sat on raised chairs a handsome Negress and a young Negro. Over their heads and almost touching were steel loops connected to the machinery. As he passed they were silently sitting and thinking, looking wearily into space, as the high frequency current passed through their bodies.

These quacks and others usually manage to elude prosecution, scurrying to other, and as prosperous, haunts when the hue gets too shrill. The Illinois Board of Education and Registration, which should always be alert against such malpractices, was last week condemned by the Tribune for being lethargic and for ignoring data brought to its direct attention. Some civil suits have already been filed against quacks for the damage they have done to patients. The Tribune in an editorial urged popular information to counter ignorance and fear, which the charlatans exploit. It said: "Medicine has long hedged itself about with a barrier of sanctity, surrounded its rites with mystery, conducted its services in a lingo incomprehensible to the layman . . . but the forward-looking members [of the profession] see the advantage to the people they serve in getting into popular language the lessons modern medicine has to teach. . . ."

(Time, Feb. 15, 1926)

## Observations from the Lighthouse.

### DIABETES AND INSULIN.

Since the discovery of insulin the "diabetically educated" patient has attained such a degree of proficiency that we have in the Maine Medical Journal for June the report of an address made by a layman, Roger E. Bousfield, before the Penobscot County Medical Association, on "Practical Points in the Treatment of Diabetes". "My only excuse", he says, "for agreeing to appear before you learned gentlemen is that diabetes has perhaps concerned me more vitally than any of you. \* \* \* I speak from the standpoint of a patient who has tried to observe".

Inasmuch as 22% of diabetics show a family history predisposing to this disease, the speaker urges physicians to keep watch on the blood relatives of their diabetic patients with a view to preventing disaster. His hearers are also warned to make sure of their diagnosis of diabetes before they prescribe, definitely excluding the possibility of renal glycosuria and of false reactions for sugar in the urine (due to pentoses and the administration of salicylic acid and its related compounds) making decision by means of blood sugar tests and sugar tolerance tests if necessary.

"Adequately nourish your patients. If necessary, cut down the fats in the diet, cut down the body weight, but give all the starches and sugars consistent with safety. \* \* \* To some the advent of insulin has been the signal for cake-eating. \* \* \* How much insulin does it take to eat a piece of cake? That is an individual question and the doctor may be justified in not trying to find out. What are the objections to giving the mild diabetic some insulin? Fear of hypoglycemic reaction? Educate him; if necessary have him undergo a reaction under your supervision. \* \* \* How much carbohydrate? All that is consistent with safety in insulin dosage. I would suggest as a minimum 1½ gr. per kilo body weight per day. How much insulin? All that the patient can safely and beneficially use. For a diabetically well-educated, intelligent adult with severe diabetes I should say that 1½ units per kilo body weight is within the safety limit. That is far beyond the sanction of most doctors, but I am convinced that it is not only safe but imperative; most patients will not require as much as that. What is the effect of prolonged dosage of insulin? For myself I have derived nothing but benefit. I had rather live one year with it than a hundred without it; and there are hundreds of the same opinion as I. \* \* \* Insulin properly used makes a well person out of an invalid. \* \* \* Educate the patient. Spare no pains, for it is only when he knows the how and a little of the why that full coöperation is possible. Give him a handbook, make him keep a note book, insist that he study. \* \* \* Undeniably it is hard to teach some people the principles of treatment. For those whom you can not instruct there is but one course—insulin restricted to a safe minimum. \* \* \* The patient should undergo some physical redevelopment. Too much exertion makes him hungry and uses up too many calories; too little, decreases his tolerance and makes him flabby. It is wrong to keep the patient in bed, yet equally wrong to advise strenuous physical effort. Bring back his physical vigor. So shall you prolong his life and make possible its continued usefulness and happiness.

## THE CHANGING CONCEPTION OF DIABETES AS A DISEASE.

George H. Tuttle (Boston Med. & Surg. J., 194:931, May, 1926) says that whereas during the last few years the cause of diabetes has been pretty generally ascribed to more or less permanent lesions of the islands of Langerhans of the pancreas, autopsies have not sustained this view, and clinicians are beginning to consider it as a purely functional condition. Comparing a series of nondiabetic and diabetic autopsies performed by Labbe, the author notes that out of a total of 37 subjects dying from various acute or chronic affections, the pancreas was normal in (only) 7; sclerosis of the glandular acini was found in various degrees in 27 cases; adiposis was noted in over 50% and the Langerhans islands were normal (only) 8 times. A series of 18 diabetic autopsies showed sclerosis completely absent in 6 cases, very mild in 6, intense in 5 and complete in 1 case. Since animal experiments show that in order to produce diabetes the pancreas must be almost completely excised, and that if only a small portion of the gland remains—for example, one-fifth—diabetes does not ensue, the sclerosis must be very intense if it brings about a complete destruction of the glands. In the majority of cases, therefore, pancreatic sclerosis can not be regarded as the cause of diabetes.

Quoting further from Labbe, Tuttle notes that fatty infiltration of the pancreas has a still slighter significance, as the pancreas follows the natural habit of the individual, whether he is diabetic or not. As to lesions of Langerhans islands, Labbe has encountered a well developed insular sclerosis as well as hyaline infiltration of the islands when no diabetes was present. Furthermore, the lesions never involved all the islands, and the development of diabetes can not be accounted for by a lesion of only a few. Another thing that claimed his attention was the want of correlation between the severity of the lesion and the gravity of the diabetes.

In 26 diabetic autopsies performed by Root and Warren the number of the islands of Langerhans was normal in 20 cases, few in 6; sclerosis was found in 6 cases, hyalinization in 13, lymphocytes in 3, and normality in 5 cases. No pancreas in this series was without a larger or smaller number of normal islands, no matter how severe the clinical features or how marked the changes in some of the islands. No correlation between diabetic coma and pathology was found. The investigators suggest the possibility of the morphologic changes being the result rather than the cause of the disease.

It is therefore evident, as Tuttle observes, that no satisfactory explanation of the pathology of diabetes can be found in the pancreas after death. Considered as a functional disease, however, in which the function of the pancreas increases or decreases according as the islands increase or decrease, diabetes becomes more easily explainable, and gives the hope, moreover, that in all but the severe cases the condition is not incurable, but susceptible of improvement. It may be that in mild cases the islands could be completely restored. Since hope of a cure depends upon the ability to raise the tolerance by the slow stimulation of added carbohydrate food with other therapeutic aids, it is interesting to note that two French observers, Gelle and Labbe, have studied the histologic process as it actually occurs in the transitional forms of change from acini to islands and vice versa, in the pancreas. When the tolerance rises the

number of acini changing to islands increases; when the tolerance falls the converse is true. This flux proceeds continually in both the diabetic and the normal pancreas, and is believed to be directly proportional to the functional strain put upon these delicate units by the food ingested. It is for this reason that the rational way to increase the tolerance in striving for a cure in mild or moderate cases of diabetes is to rest the pancreas, either by holding the food at the level of the natural tolerance for a month or more, or by means of small amounts of insulin for a like period, then slowly to raise the tolerance by gradual additions to the diet. The added carbohydrate stimulates the change of acinous to insular units, increases the number of islands, and thus makes the pancreas produce more insulin, which is the object of the treatment and the only way in which diabetes can be cured.

The author calls attention to the fact that most so-called diabetic deaths are not due to diabetes but to more fatal diseases acting upon diabetic ground.

## EFFECT OF INSULIN TREATMENT ON EXPERIMENTAL DIABETES.

What is regarded by Banting and others as a most important piece of research is reported by E. F. F. Copp (California & Western Med., 24:618, May, 1926), who was associated with Banting in his early experiments with insulin. The object of the work, Copp tells us, was to discover what changes are taking place in the pancreas, especially the islands, as a result of insulin treatment. In the series of experiments some 30 animals were used, dogs being found best suited for the tests. Each dog was submitted to several operations. At the first one, from eight-ninths to twelve-thirteenths of the total amount of pancreatic tissue was removed, and the small remnant of the gland was left around the major or minor duct. A specimen was saved for microscopic examination. The dog was then placed on high carbohydrate diet for approximately one month, during which time the animal was actively diabetic. A second operation was then performed in which a specimen of the gland was removed for microscopic examination. These sections showed that the alpha and gamma cells of the pancreatic islands remained in good condition but that the beta cells exhibited so-called hydropic degeneration. The acinar cells remained normal. Vacuolation of some of the cells lining the ducts was also seen at times. Immediately after the second operation treatment with insulin was started and subcutaneous injections were usually made 3 to 4 times a day at fairly even intervals during the 24 hours. Each dog was placed on a carefully weighed diet, usually being fed 3 times a day on lean meat. A strictly normal level of blood sugar was aimed at and maintained during the whole of this period. This program was kept up for 24 hours to 3 weeks, many specimens of pancreas being removed from different animals at varying intervals.

Results showed the complete disappearance of hydropic degeneration of the beta cells of the islands of Langerhans, and restoration to normal was found after a period of 14 days of insulin treatment. About the ninth day vacuolation began to subside, but before this period very little recovery could be noticed. Careless control of the diabetes showed that the functional overstrain on the islands had not been relieved, as



they still exhibited hydropic degeneration. Investigators have reason to believe, says Copp, that hyperglycemia, without sugar in the urine, will prevent the clearing up of the pathologic picture of vacuolation of the island cells. Lack of control of the symptoms of diabetes in dogs is rapidly followed by acidosis. It is interesting to note that before insulin treatment of diabetes in dogs, it was almost impossible to produce a severe acidosis in these animals. Now it is easily done by suddenly stopping the administration of insulin but keeping on with the same diet. The glucose tolerance of diabetic dogs under insulin treatment will improve, often remarkably. The diabetic dog thrives best when strictly normal blood sugars are maintained.

Copp has been unable to prove definitely the formation of new islands but vacuolation observed occasionally in centro-acinar cells and in the small ducts or cell cords seems to suggest an intimate relationship between these cells and the beta cells of the island.

As the pathologic changes of the pancreas as a result of diabetes in the dog and in the human are almost identical, it is important to realize that only by careful control and by the maintenance of strictly normal blood sugars can one expect to have the already damaged organ in diabetes functioning at its best. Occasional presence of sugar in the urine means the probability that some of the beta cells of the islands are becoming vacuolated, and if this is repeated it may mean the destruction of island tissue with a further irreparable loss in food tolerance. Just what is happening to the patient's pancreas when under good control is an interesting speculation, but when under poor control we most certainly know, says the author, that specific pathologic changes are taking place detrimental to the patient.

In discussing the foregoing paper, Banting of the University of Toronto, Canada, says in part, "The fact that Dr. Copp has been able to show the complete disappearance of hydropic degeneration of the beta cells of the islets of Langerhans in partially depancreatized dogs by insulin treatment is of great importance, because it provides experimental evidence which supports the clinical findings that, in order that there be a gain in tolerance, the islets of Langerhans must be relieved of all strain".

Frederick M. Allen, of the Physiatrie Institute, Morristown, New Jersey, regards the ability to produce specific island changes at will by dietary overstrain, and to arrest these changes by relieving the overstrain, as so significant that these simple experiments should be tried by those pathologists who still doubt the island theory of diabetes.

The occurrence of this degenerative process furnishes the anatomic explanation of the progressiveness of diabetes. One of the traditional errors that was hardest to overthrow was belief in the inherent progressiveness of diabetes. There is now agreement of experimental and clinical proof that diabetes is progressive when the island function is overtaxed, and is not progressive when that function is spared. The means of overtaxing the function are also significant. Not only carbohydrate but also the total calories and body weight influence the island function in both dogs and patients. It is unfortunate that it should still be necessary to repeat this very simple and easily demonstrated fact. Increased calories in the form of fat increase the tendency to glycosuria and acidosis, and increase the insulin requirement. \* \* \* \* The

pernicious fad of high fat diet rests only upon inconclusive observations that some patients can be freed from glycosuria and acidosis, in spite of such diets. Accurate comparisons of low and high fat diets have never failed to confirm this fact, which, besides its practical importance, has a deep theoretic significance with reference to the rôle of insulin in the bodily chemistry."

John R. Williams, of Rochester, N. Y., while admitting the value of maintaining the body chemistry as nearly normal as possible in diabetes, says that "the difficulty of doing so in severe cases is another matter. If it has to be done at the cost of marked undernutrition, it is an open question". The patients in my care who are permitted to maintain an approximately normal nutrition not only feel better, but appear clinically improved and show no evidence of breaking down. Some of these patients have carried high blood sugar and urine sugar, and in other ways have violated the conventional beliefs as to the importance of diabetic standards. \* \* \* \* Without insulin, on the plan of undernutrition alone, my patients were greatly benefited for a considerable period of time; eventually they failed, and although the expectancy of life was extended as much as 100%, the disease progressed and the patient finally succumbed either to inanition or to the diabetes. I have noticed no such regression since the use of insulin.

#### INSULIN IN RELATION TO DIABETIC GANGRENE.

In an excellent summary of a most interesting paper on Diabetic Gangrene, with Particular Reference to the Value of Insulin in its Treatment, Harry Blotner and Reginald Fitz (Boston Med. & Surg. J., 194:1155, June 24, 1926) report a clinical study of 69 cases of diabetic gangrene observed at the Peter Bent Brigham Hospital. Of the 969 cases of diabetes admitted to the hospital in the last 12 years, 7% were complicated with gangrene, which usually depends upon obliterative vascular lesions in the extremities of elderly diabetic patients, with superimposed infection, thrombosis or osteomyelitis. The condition may, however, occur in young persons with essentially normal blood-vessels and be of infectious origin. The underlying cause of the vascular disease encountered in the majority of cases of diabetic gangrene is unknown. Syphilis was of only slight importance as an etiologic factor in the cases reported, and the relation of biochemical changes encountered in diabetes to the development of arteriosclerosis was a matter of speculation.

Trauma, often of a very minor nature, was the immediate cause of the gangrene in 65% of the cases. More cases originated during the winter than during the summer months; 2 patients developed gangrene while at rest and under observation in the hospital. Minor injuries, cold weather and the lack of exercise, therefore, all seemed important factors in the precipitation of this complication.

Diabetic gangrene has a notably high death rate, 23% of the patients in this series dying while under treatment in the hospital. The results of medical treatment of gangrene have, in the authors' experience, been disappointing, but the effect of insulin upon the surgical cases has been of particular interest. Up to October, 1922, when insulin was first used in the hospital, 25% of the gangrene patients treated by one method died, while since that date 18% of

the patients have died. Insulin, therefore, seems to have had an appreciable effect in lowering the hospital's mortality rate in these cases.

In comparing cases of diabetic gangrene treated surgically with and without insulin, it appears that insulin has afforded a means of rapidly desugarizing patients before operation and of allowing them a liberal diet during the period of convalescence. Before the days of insulin certain patients died in coma; others were forced to undergo prolonged periods of malnutrition in preparation for operation and during convalescence therefrom, suffering progressive loss of weight and strength; they became unresistant to infection, required repeated operations and finally died after a protracted illness. With insulin, patients are made free of acidosis and prepared for operation in a few hours; they are able to manage an adequate diet shortly after operation, as a result of which they gain weight and strength, resist infection and recover from their illness in a rapid and gratifying manner.

The hospital's death rate from diabetic gangrene is considerably higher than the present death rate from diabetic coma. The authors believe that the proper use of insulin in the treatment of diabetic gangrene is as important as is the proper use of insulin in the treatment of diabetic coma, and that all cases of diabetic gangrene should be treated as carefully and as energetically as cases of diabetic coma are treated.

#### INSULIN IN INFANT FEEDING.

The use of insulin in the treatment of non-diabetic conditions is still in the experimental stage. According to Hyman Green and George Robbins (Boston Med. & Surg. J., 194:1162, June 24, 1926), its use in relation to the treatment of malnourished infants was first suggested by Pitfield in 1923. He was impressed with the stimulating properties of this active principle of the islands of Langerhans and he tried injecting 1 unit of insulin daily for 3 weeks in 2 young infants. The injection was given at the same time as the morning feeding and Pitfield considered that beneficial effects were obtained in both cases.

It is usually stated that a normal infant of average weight requires a daily intake of food having a fuel value of approximately 45-50 calories per lb. body weight, and that the amount of whole milk required to supply the necessary protein and mineral salts approximates  $1\frac{1}{2}$  oz. per lb. body weight. In the case of an undernourished infant, weighing one-half what he should weigh, the total food requirement is likely to be in the neighborhood of 100 calories per lb., and the milk requirement about 3 oz. per lb. body weight. It is generally found quite impossible to give these infants the optimal quantity of food as they are unable to handle it, so some means must be devised to increase the capacity for utilizing the food.

The 9 cases reported by the author in which insulin was administered to stimulate nutrition were selected as the most difficult in the wards. The dose of insulin was based upon the ratio of 1 unit of insulin to 15 gr. carbohydrate in the diet. In 3 cases this was changed to 1:13, 1:25 and 1:50, respectively. All the patients gained with the exception of 1 who was handicapped by severe complications. In 6 cases the gains were striking. An improvement in the

general condition was observed in 5 cases; a doubtful reaction occurred in 1. The authors disclaim any intention of offering insulin as a panacea for malnutrition but they believe the foregoing observations on a limited number of cases are suggestive.

## National Medical News.

### RESUME OF THE PROCEEDINGS ANNUAL CONVENTION OF THE AMERICAN MEDICAL ASSOCIATION,

Dallas, Texas, April 19-23, 1926.

The first feature of this great convention that one wishes to mention, is the hospitality extended to those in attendance. We had heard of and experienced "southern hospitality" at other places, but were scarcely prepared for the overwhelming cordiality of the Dallas specimen of entertainment. Southern courtesy and generosity were in this southwestern city combined with western open-hearted good-will and liberality; a combination that left nothing to be desired. The entertainment was of a lavish character, yet was given with such apparent simplicity as to make us feel entirely at home.

The scientific sessions call for little comment, as they were of the usual high class and the papers read at the various Sections are appearing in the A. M. A. Journal. It may be worth mentioning that the moving picture exhibition, running constantly, was even more successful than heretofore. The program was not only extremely interesting but was run upon a definite time schedule which was adhered to with such accuracy that one could plan to drop in at a fixed time for those subjects he desired to learn more about. Likewise, the pathologic exhibit was well arranged for study. One of the most striking exhibits in this department was that prepared by Dr. Alexander Lambert to explain "Cardiac pain and sudden death in angina pectoris". Dr. Lambert was always at this booth to explain his specimens and charts, and the Committee on Cardiology has published an illustrated brochure upon this work which should be of inestimable value to the general practitioner.

The business sessions of the House of Delegates dealt with many questions of interest to the general profession. The most important matters had been submitted to all delegates in a pre-session volume of committee reports so that they might come prepared for intelligent discussion and action upon such questions. In accordance, too, with the custom of the organization all reports from officers and standing committees were promptly given to special reference committees to be digested and submitted to the House at a later session with recommendations. This plan certainly facilitates the careful and deliberate transaction of business.

#### BOARD OF TRUSTEES.

The Board of Trustees presented a detailed report of the many aspects of Association Work considered during the fiscal year and every member should inform himself by reading that report in full, as published in the Journal of March 20, page 845. Under the very able guidance of this



board, the business of the Association has prospered most satisfactorily. The Journal easily maintains its position of leading medical journal of the world, with a circulation of more than \$6,000 weekly. The receipts from sale of advertising space in the Journal showed a gain of 11% for the year, and this in spite of very strict censorship governing the acceptance of advertising matter. Of the special journals published by the Association, 4—Internal Medicine, Diseases of Children, Surgery, and Otolaryngology—returned a profit, while 2—Neurology and Psychiatry, and Dermatology and Syphilology—were published at a loss. Hygeia has reached a monthly circulation exceeding 41,000 and is approaching a self-supporting basis.

**Periodic Health Examinations**—The Trustees reported reasonable progress in this movement. The Manual of Suggestions for Health Examinations has received a cordial reception by the profession throughout the country. (A supply of these manuals is on hand for distribution to our own members in New Jersey, in combination with the other essentials for conducting such examinations, and will be supplied by the Executive Secretary at cost price.) It was suggested by the Trustees that every county medical society should devote at least one meeting each year to consideration of this question, if necessary calling upon the State Society for lecturers and demonstrators to aid in developing local interest. A special exhibition was arranged for State Society officials, at which a film was projected on the screen depicting the conduct of a complete physical examination. (Our State Society, at the recent annual meeting, authorized the purchase of a copy of this film for use of the county societies.)

**Bureau of Legal Medicine and Legislation**—Coöperation between this Bureau and the State Society legislative committees has grown very materially, and with benefit to all concerned. By interchange of experiences the state associations can reduce to a minimum the occasions on which they acquire knowledge in the school of experience, and in which knowledge may come too late to be of practical value. The Bureau has reason to believe that Congress will reduce the Narcotic Registration tax to \$1.00 per annum, and reported that the governmental proposition to require an additional registration, without cost, for the prescribing of exempt narcotics has been abandoned by the Internal Revenue Department. As yet the Bureau has not succeeded in securing deduction from Income Tax of moneys spent by physicians in travel and general expenses attending postgraduate study; it will probably be necessary to have some individual member institute an appeal from the decision of the Commissioner of Internal Revenue in order to have this question decided by the court.

**The National Prohibition Act Case**—Lambert versus Yellowley—is still pending before the United States Supreme Court; the object of this suit having been to have declared unconstitutional the quantitative limits on prescribing of liquor as now laid down, on the grounds that no authority has been delegated to Congress to proscribe the use of remedies which qualified physicians believe to be efficacious in the treatment of disease. At the Atlantic City meeting, in 1925, the Association authorized the Trustees to appoint a special committee to confer with the Assistant Secretary of the Treasury in charge of prohibition with a view to drafting satisfactory regulations governing the distribution of

medicinal liquor in the event that the quantitative limitation referred to shall be declared unconstitutional. A committee was appointed, conferred with General Andrews, and submitted to the Trustees a report containing, among others, the following recommendations:

(a) Any physician prescribing more than 1 pint of liquor in 30 days to the same patient shall issue a certificate to accompany said prescription and be necessary to its validity, that the excess prescribed for is in the judgment of the prescribing physician a medical necessity; and the prescribing physician shall forthwith mail or deliver a copy of said certificate to the prohibition administrator of the district in which said prescription is to be filled.

(b) That any person to whom a pharmacist delivers liquor called for by any prescription be required by the pharmacist to pledge himself in writing on the prescription blank, that, so far as lies in his power to prevent it, no part of any such liquor will be used for other than lawful medicinal purposes.

(c) That the allowance of spirituous liquor to physicians for emergency use be reduced so as not to exceed normally 2 quarts annually, not more than 1 pint to be purchased by the physician at any one time; and that the amount of alcohol allowed physicians for other than internal administration be reduced so as not to exceed normally more than 3 gallons annually to any one physician: Provided, however, that prohibition administrators be empowered to authorize larger allowances, both annually and in the quantity purchased at any one time, in the case of any physician who submits to the prohibition administrator within whose jurisdiction he practices satisfactory evidence to show that the nature and extent of his practice are such as to make such larger quantities necessary.

The report was considered by the House of Delegates in executive session, sitting as a committee of the whole, so we are not informed as to the arguments but the final decision as recorded is that the committee is to be continued, with such additional members as the Trustees may find advisable, and with instructions to report at the next annual meeting. This action was possibly taken to allow time for all members to consider the newly proposed restrictions and to give expression to their views.

**Veterans' Bureau**.—It will be remembered that at the 1925 session the Association adopted resolutions disapproving the provisions of the World War Veterans' Act of 1924 granting to all veterans, regardless of need, the privilege of hospitalization and treatment at government expense for all diseases and injuries whatsoever, and whether or not traceable to military service. Bills pending before the Congress of 1925-26 propose to extend such bounty to include out-patient treatment, as well as the hospitalization already authorized, and to make both provisions cover-in civilian employees who served overseas. Furthermore, one bill proposes the establishment of a "commissioned medical corps" for this bureau.

Colonel Gilbert E. Seaman, representing General Hines, Director of the Veterans' Bureau, addressed the House in explanation of existing conditions and problems. He pointed out the fact that his bureau has the largest number of hospitals, dispensaries and patients under one organization in the United States, if not in the world. This bureau does not make the law, that being a

function of Congress, but has to follow the provisions of such laws and render to the disabled ex-service man such attention as is provided by the government.

"There were approximately 5,000,000 men and women who served in the war. Of this number a certain proportion suffered in health, or will suffer by reason of their service. The Veterans' Bureau conducts 50 hospitals and more than 100 dispensaries. In these hospitals during the past year there have been hospitalized approximately 77,000 patients. At the end of the last fiscal year there were in hospitals approximately 27,000 patients. Of this number 83% were suffering from service connected disabilities, while 17% were veterans of all wars or military movements since 1897 suffering from disabilities which may or may not have been connected with military service; some having applied but their service connection not yet determined. Many of these were veterans of the Spanish American War, the Philippine insurrection, the Boxer rebellion and later military operations, some of whom had grown old, many of them drawing small pensions and all of them suffering from some disability, compensable or otherwise. The World War Veterans' Act provides, it is true, for the care of veterans under certain circumstances regardless of the origin of their disability, but only when hospital facilities in Veterans' Bureau hospitals are available, and preference is given to those who are financially unable to adequately care for themselves. It will therefore be seen that this very generous, many people think too generous, and some people think unwarranted provision of the law, does not apply to a very large percentage of the total number in hospitals. The extension of Veterans' Bureau hospital facilities for the care of non-service connected disabilities of ex-soldiers is not contemplated."

(According to newspaper reports the amendments to the Veterans' Act were passed by Congress in the final hours of the session just closed, but we are not informed as to what extent they were modified by conference between the House of Representatives and Senate committees and do not know whether any of the objectionable features were obliterated or toned down.)

**Dealing with Cults**—The House of Delegates, considering another feature of the Trustees' Report, adopted a resolution condemning the United States Department of Labor for giving "approval" to chiropractic schools and thereby encouraging quackery, and calling upon the Trustees to see that every proper effort is made to have such approvals canceled. The Department of Labor had, apparently without any investigation of their teaching facilities, put the stamp upon these schools, 11 in number, as institutions for the receipt of student immigrants outside of the quota limit, such approval carries the coincident posting of lists in our consulates abroad, and the chiropractic schools accepted and adopted that as a means of advertising.

In that same connection, the Trustees called attention to the determined efforts on the part of sectarian practitioners in some districts to force themselves into hospitals on an equal footing with physicians. This situation merits the close attention of state and county medical societies, as the movement may be expected to show itself in new quarters.

Legislative Representative at Washington—After considering the suggestion, made at a

previous meeting, that the Association maintain a full-time representative in Washington, the Trustees had declined to make such an appointment, in the belief that the delegates had not understood at the time of the aforesaid action that there existed connections at Washington that seemed to be adequate. The question was considered by the House of Delegates in executive session and it was finally decided that the Trustees be requested to provide a representative in Washington during the legislative sessions.

## REPORTS OF SECRETARY AND GENERAL MANAGER.

Dr. Olin West presented a most satisfactory and instructive report covering the details of this very important office. The growth in membership continues and now shows an enrollment of more than 91,000. "Most of the constituent associations have made definite progress during the year in strengthening themselves as organizations and in providing more helpful service for their members. Some have extended their activities so that the benefits of membership have been greatly enhanced. The state associations as such, are, in most instances, stronger than ever before. A great deal has been done within the last few years toward perfecting their organizational machinery."

**County Societies**—"The county medical society is the fundamental unit in our scheme of organization. More than that, it is the essential factor in the record, whether of progress or otherwise, that may be made by medical organization as a whole. A constituent state association can not permanently succeed, no matter how its own separate machinery may be developed, unless its component county societies are meeting their own responsibilities with reasonable efficiency. No more can the American Medical Association fully succeed unless its basic units are efficient. There are those things that must be done, and done well, by the county society for itself and for organized medicine as a whole. In building up the state association or the American Medical Association, great care should be taken to see to it that nothing is done to weaken the county society, whether by taking over the work it should do for itself or by any other method.

As has been stated in reports heretofore submitted, there are, as is clearly shown by official reports from their own officers, too many county societies that are stagnant. In many instances persistent effort has been made to stimulate them into action without any measurable success. It might be worth while for the state associations to undertake a careful survey, each within its own jurisdiction, with a view to making a final effort toward bringing every chartered component unit as now constituted into useful activity, or, failing that, to effect organization anew by the combination of 2 or more counties into 1 society. This plan has already been tried to good advantage in some instances.

Turning to a brighter side of the general picture, it is extremely gratifying to report that many county societies in all sections of the country are doing more and better work than ever before. Among these are some with relatively small membership. Their programs of work, scientific and otherwise, are prepared with care



and carried out with inspiring enthusiasm. Such societies confer real benefits on their members and exert a most helpful influence in their own several communities. They are the strength of medical organization in the United States.

It is easily apparent to any who will examine the facts that the scientific work of constituent associations and of active component county societies is showing constant improvement—in both quantity and quality. More and more the scientific programs are being made really purposeful. This appears to be largely due to the fact that the compilation of these programs is made the duty of qualified committees, elected officers, or otherwise. The programs are planned far enough ahead to give contributors ample time for the preparation of well thought out papers and discussions.

There seems to be a growing tendency on the part of some county and district societies toward depending on 'outside talent' exclusively for program material. It may be that this tendency, if permitted to develop, will destroy one of the important purposes of these societies, namely, to encourage study and promote the art of expression, by both the written and the spoken word, among their own members."

#### SUPPLEMENTARY REPORT OF REFERENCE COMMITTEE.

**County Societies**—This committee added to the Secretary's report the following comment relating to county societies: "The county society should be the fountain head of scientific work." The secretary very properly points to a danger in this connection. The scientific program of a county society should accomplish 2 distinct things, instruct the membership and develop in members the scientific ability and the ability to express themselves. If these programs do not bring to the society those who are qualified to speak and able to speak, instruction will suffer. On the other hand, if this is done to the exclusion of discussions by members generally, there will be no development. State associations and county societies will do well to give special study to this problem.

We feel that the annual conference of secretaries of constituent state associations is proving of great value. We trust that the Board of Trustees will continue to foster this practice. One of the most difficult tasks confronting our national organization is that of coördinating the activities of constituent state associations and bringing about the maximum uniformity of laws and regulations for their government. There can be no better agency for this purpose than the annual conference of state secretaries."

(At our own recent annual meeting the secretaries and reporters of county societies were brought together for a conference and the results were so pleasing that it is hoped this may become an established custom. The first gathering was necessarily in the nature of an entertainment but successive meetings will provide opportunity for these county society officers to present and discuss their local problems so that by exchange of experiences the general level of accomplishment may be elevated.)

(To be continued).

## Current Events.

### ABSTRACT REPORT OF THE THIRD TRI-STATE MEDICAL CONFERENCE.

Held at Philadelphia, June 21, 1926.

The third meeting of the officers from the New Jersey, New York and Pennsylvania State Medical Societies was held at the Philadelphia County Medical Society building on the afternoon of Monday, June 21, 1926, Dr. Ira G. Shoemaker and Dr. Harry W. Albertson, alternately, presiding and Dr. Frank C. Hammond acting as Secretary. The 3 states were represented by the following officers:

New Jersey: J. B. Morrison, Recording Secretary; Andrew F. McBride, Chairman of the Welfare Committee; Henry O. Reik, Editor; Charles B. Kelley and Alexander MacAlister, representing the Board of Medical Examiners.

New York: George M. Fisher, President; Joseph S. Lawrence, Executive Officer; H. P. Hourigan, Chairman of Committee on Workmen's Compensation; and Harold Rypins, Secretary of the Board of Examiners.

Pennsylvania: Ira G. Shoemaker, President; Harry W. Albertson, President-elect; Arthur C. Morgan, Chairman of Committee on Legislation; L. F. Stewart, Chairman Commission on Workmen's Compensation; Frank C. Hammond, Editor; William H. Hillegas, member Board of Medical Legislation and Licensure; Moses Behrend, President, Philadelphia County Medical Society; George H. Meeker, Dean of Graduate School of Medicine, University of Pennsylvania; and Charles S. Pitcher, Superintendent of Presbyterian Hospital, Philadelphia.

The Secretary announced that a telegram had been received from Dr. Van Etten explaining that illness prevented his attendance and, on assuming the chair, Dr. Albertson introduced Dr. George M. Fisher as the recently elected President of the Medical Society of New York State.

Dr. Fisher: Your program for the afternoon is so extensive that it is hardly in line to make an address but I do wish to convey to you the best wishes of our State Society in carrying on the work you have started. There is a general opinion that there should be a better interlacing of the medical laws of these states, because you will bear in mind that in these 3 states we have one-fifth of the population of the entire United States, and probably about the same percentage of the physicians of the country. We have also approximately 20% of all the hospitals and it stands to reason that in a district so thickly populated and with so many physicians there should be an interlocking system of laws that would be satisfactory to all 3 states.

#### Postgraduate Medical Instruction.

Dr. George H. Meeker, Dean of Graduate School of Medicine, University of Pennsylvania, addressed the conference upon the subject of postgraduate medical work for the practicing physician. He felt that no one plan would be applicable to all communities, since both the needs and the facilities vary considerably in different localities. In the vicinity of a medical school and in a community well supplied with hospital facilities, the problem of postgraduate teaching is quite different from that existing in a community remote from

such institutions. Attendance upon the regular medical society meetings may be considered as postgraduate study in a sense and it is possible to make such meetings part of a general scheme for teaching and studying. The thing most generally needed, however, seems to be some definite courses of study for general practitioners in the rural districts and that these courses shall be conducted by specialists who can speak authoritatively on their subjects and yet can at the same time sense the particular needs of the family physician. The teacher must be thoroughly familiar with and the master of the subjects he teaches and his teaching must not be that of merely repeating text-book instructions; the physician student can read that for himself.

Dr. Meeker suggested that instead of an elaborate "course" of instructions in any branch, the word "course" implying that the subject will be fully covered from beginning to end, we substitute "topical" teaching and let the selected topic be fairly completely covered during the period of instruction. The Philadelphia County Medical Society has been developing a plan of that character. As applied to district societies this would mean that the educational committee of the State Society should first ascertain the needs of the general practitioners in a county or district, and then provide for presentation of information bearing upon the topics selected. "For instance, at the Philadelphia County Society the first subject selected was that of 'Physiotherapy' and a seminar on that subject was arranged. The Committee which was first appointed was under the Chairmanship of Dr. Ralph Pemberton, who is an Internist, who has given much attention to this subject of Physiotherapy; Dr. Tait MacKenzie, who is the Professor of Physical Education in the University of Pennsylvania, and the lecturer there upon Physiotherapy; Dr. Hill, an Orthopedic Surgeon; Dr. Lee, a member of your body who was a prominent surgeon in his day; Dr. J. Madison Taylor, a man who has devoted much of his life to the subject of Physiotherapy; Dr. Corcoran, a practitioner of Physiotherapy; Dr. Weisenburg, a Neurologist who has been associated with this kind of work ever since the days of Weir Mitchell; Dr. Johnson, a practicing Electrotherapist; Dr. Miller a practicing Physiotherapist; Dr. Pfahler, a Radiologist; and Dr. Schamberg, a Dermatologist.

The Committee was practically coincident with what might be termed the faculty for this teaching although occasionally they brought in assistants. You will notice there is not a general practitioner there. Every man is a specialist and a specialist who has had something particular to do with Physiotherapy, either because he practices it or because he practices some specialty in which he has given considerable attention to the Physiotherapy phase of his therapy.

The decision was made to have these meetings always occur at 4 p. m. on Fridays and to give 5 of them this spring. The first one was on Thermo- and Hydrotherapy. The second one on Massage and Manipulation, the third upon Light Therapy, the fourth upon Radiotherapy and the fifth and last upon Diathermy.

Broadly speaking, the topic was treated in a generalized way. Pains were taken to have a lot of illustrative apparatus here of a modern character and so there was an exhibition and demonstration of that. Then the patients were here; many of them were private patients who kindly consented to come at the behest of the members of

what I, for want of a better name, call the Seminar Faculty.

There were many illustrative cases, and it was not simply a matter of saying, 'Light is good for this or x-ray for that, or manipulation for the other thing'. The actual cases were here and you could talk to the patients themselves if you pleased, and there was a good bit of discussion of that sort.

We have intermitted for the summer to resume in the fall, namely on October 3. The program I am now giving you is not official because the Executive Committee has not been called together to endorse it but I have no doubt when the Executive Committee comes together on Thursday of this week it will endorse this plan which includes a series of 11 seminars on "Cardiology", the cardiology seminar beginning on Friday, October 1 and ending December 17, just before the Christmas holidays. That does not mean that we will necessarily drop cardiology then or that we will drop the seminars, merely that that is as far as our program at present extends. Between now and then, that is to say before next fall, the committee will take up a further program.

You will notice that is almost entirely diagnosis, so that if this diagnosis portion takes, we will know then from those who attend they want cardiology to continue, and if so, no doubt, cardiology will still be continued, without pretending to give a course in cardiology. It is simply taking it up topically. What the eventual future of this will be in Philadelphia no one, of course, can say, but I will say those who have attended and seen what has already been presented, have been benefited whether they be general or special practitioners, and those who will attend this program, whether general or special practitioners, will have been benefited by the conclusion of this really remarkable series of seminars. Furthermore, there will have been covered something quite different from anything covered in the many medical meetings in Philadelphia.

Now, in addition to this, which is only a part of the program, we are circularizing the hospitals of Philadelphia, saying to the hospital 'Now, if you wish to become potential sublocal centers for the physicians of your districts, send to us the hours and the days on which you are working with your patients, either in the operating room or in the wards, and we will announce it in the Weekly Roster, that the neighborhood physicians can meet you there on such days and that you will give them special attention when they come.'

Dr. Fisher, discussing this general topic, referred to the work being conducted by the New York Society, by the committee of which Dr. Gordon is chairman, a description of which has already been published in this Journal.

Dr. Reik: New Jersey has no medical colleges within her borders and I understood Dr. Meeker believes that it is almost impossible to conduct a county society postgraduate work without drawing upon the resources of some teaching institution. He was good enough to submit to the New Jersey Medical Society last year a plan whereby they might take advantage of the courses offered by the University of Pennsylvania. At the last conference we were much impressed by Dr. Gordon's plan but we have not as yet been able to put either plan into satisfactory operation.

I wanted to ask Dr. Meeker if he could, in a few words, give us some idea of the manner in which postgraduate teaching can best be carried



to the small towns and county societies without burdening them with too heavy a cost. He might also tell us to what extent the smaller counties of Pennsylvania have taken advantage of the excellent courses offered by the University.

Dr. Meeker: I would be only too happy to answer these questions but for the fact that the matters concerned therein are very intricate and it would require more time than you can allow me this afternoon. I will simply say that we could have covered the whole state of Pennsylvania had we been able to afford it; to do so would require a budget of at least \$20,000 a year. I believe that, on the ground of general public welfare, the state legislature could appropriate funds for this work. I do not see how any state can carry on this work without the help of some medical school; I do not see how the counties are going to get the thing across successfully without some medical school relationship.

#### Workmen's Compensation Law.

The presiding officer introduced Dr. Andrew F. McBride, Commissioner of Labor for New Jersey, who presented a paper entitled, "What Is Wrong With Our Workmen's Compensation Laws and What We Can Do to Correct Them", which is published in full, as an original article, in this number of the Journal. (Page 429.)

Dr. Hourigan: The discussion of this subject was opened by Dr. Hourigan who explained the situation in New York State regarding compensation laws. The first law of the kind in New York was enacted in 1910 but was declared unconstitutional and the subject was submitted to vote of the people, resulting in establishment of the present law in 1914. Prior to 1910 the industries of the state paid something like \$45,000,000 for the care of injured or insured men, what they called negligence insurance, and of that \$45,000,000 something like \$6,000,000 went to the injured men and the physicians, while about \$28,000,000 was pure profit to the insurance companies. The compensation law wrought a considerable change and while the total cost to industries last year was about \$55,000,000 it is estimated that the injured workers received about \$25,000,000 and the doctors approximately \$9,000,000. Naturally, with all this activity there have arisen some differences of opinion. The doctors have not always been satisfied with some provisions of the law because cases have been lifted, bills have not been paid and there has been lack of coöperation all along the line. We have the family doctor, the insurance doctor, the industrial doctor, and still other types all working more or less apart and there has grown up a demand in the medical society for some closer relationship between organized medicine and the department enforcing the compensation law. It was in consequence of this that I was made chairman of a committee to consider the problem and after many meetings and consultations we have decided to formulate an amendment to the New York law. I shall not read the entire act but refer to the main points. In the first place, we asked for closer coöperation between the medical society and the Commission; this to be attained by the creation of a State Medical Advisory Council which would consist of 5 doctors selected by the State Medical Society and appointed by the Governor, and this council to be clothed with authority to investigate every part of a medical question. Further, it has been suggested that district councils may be appointed by the

State Medical Advisory Council and the Commission, and given power to function in the same manner in local areas. Secondly, the act deals with the question of postmortem examinations. We have attempted to write in a provision upholding the local postmortem examiner and to provide for the selection of examiners, real pathologists, who shall be capable of making proper investigations and reports to the Commission. Thirdly, one of the most important sections deals with the manner of conflicting medical evidence. I think the best minds believe that this conflict is usually due to the system rather than to the doctor and instead of permitting a case to become tangled in a mass of conflicting testimony we would have it sent at once before a competent referee and for this position one should be appointed who can properly evaluate scientific testimony.

Dr. Behrend: As our presiding officer, Dr. Albertson, has said, the doctors in Pennsylvania were asleep at the switch when the Workmen's Compensation Act was put through our legislature. The law and its administration is in a chaotic state, being interpreted differently in different parts of the state. For instance, in Philadelphia and Pittsburgh, the physicians and the persons who are supposed to benefit by this act have been generally ruled against when the insurance carrier or the employer has been called upon to meet the demands of those who have been giving them service. This applies also to some extent to the hospitals, for in these 2 cities we have little redress in efforts to obtain compensation. The history of the law's working in Philadelphia has been quite interesting. For about 3 months, in 1915, there was no complaint and everybody was paid all over the state, but after that came a reversal on the part of the carriers of insurance who represented the employers. Unfortunately, the situation is complicated through the insurance companies and the large industrial concerns, which are often self-insurers, having powerful political influence in Pennsylvania; and whenever medical matters come under political control it is extremely difficult to secure just consideration. One of the difficulties we have had to contend with is that of the so-called Mackey decision which is to the effect that as long as a case is being treated in a hospital ward the physician has no right to receive compensation for his work. This was an atrocious decision, putting great hardship upon the physician, and constitutes a real miscarriage of justice.

We are making an effort to correct some of the faults in our present law. In the first place, we ask that the physician and the hospital shall have a definite standing in law; at present the physician can not bring suit in these cases because he is considered as not being a party at interest. We wish also that provision shall be made for adequately compensating physicians at the hospitals regardless of the time when death occurs and regardless of the sum paid to the undertaker. Thirdly, we want physicians paid for services rendered in compensation cases regardless of where the service is rendered and without reference to local hospital rules. One clause of our act provides: "Unless otherwise provided, the compensation case at the end of 30 days shall become a charity case if methods of investigation approved by the State Welfare Board prove such a case to be a proper case for charity. There shall be created 3 medical boards consisting of 3 members each, representing Capital, Labor and the Medical Profession, selected by the Governor, to

make a decision as to whether a reasonable opportunity exists of improving the condition of the injured man after the 30 day limit has expired by further hospital and medical attention. When there is a dispute between the injured man and the employer as to the responsibility for such service, the cost of such service shall not exceed \$200 additional."

There are a few other items of lesser importance but I believe this creation of a medical board is exceedingly important, and we have also provided for reeducation and rehabilitation of the injured man, subjects about which nothing is said in our present law.

Dr. Stewart: Continuing the discussion, Dr. Stewart said he felt that the compensation law of New Jersey approached the ideal and that the other states might well follow the Jersey plan of procedure. He considered it a very important fact that the New Jersey Commission is presided over by a physician, and he thought that with such a man as Dr. McBride at the head of the department there would be little need to provide for a consultant or a referee in problems that are largely medical in character; Dr. McBride has, of course, a proper evaluation of the testimony to be considered in these cases.

In Pennsylvania powerful business interests control the situation and the physician has practically no standing in the courts. Not only was the Mackey decision abnoxious to the profession but there has been another troublesome decision to the effect that in case a death occurs within 10 days from the time of the injury \$100 is allowed for funeral expenses alone and no medical or hospital expenses are provided for those 10 days. Quite recently the Supreme Court has handed down a decision which says: "Regardless of the time of death, medical and hospital, as well as funeral expenses, must be paid".

One thing must be kept in mind when attempting to improve the existing laws, and this is expressed at the risk of being thought idealistic, that the proposed change must be primarily for the purpose of improving the condition of the injured individual.

Dr. Morgan: At this point, Dr. Morgan exhibited and distributed blank forms prepared by the Medical Society of Pennsylvania for safeguarding physicians, surgeons and x-ray operators against malpractice charges in these compensation cases.

Mr. Pitcher stated that the hospitals have joined in an effort to improve the situation and are carrying on a campaign of education through "Hospital Management" and other Journals.

Dr. Reik: Before this discussion is closed I would like to submit a suggestion, growing out of my interest in the organization of this conference. We have listened to a very interesting discussion of the compensation laws of these 3 states and the mere presentation of these points of difference will doubtless be of considerable benefit to those of us who are serving as officers in our respective societies. However, I am not entirely satisfied to leave it in this condition; I would like to see these things brought out clearly and, if possible, conclusions brought to some definite point. I wonder if it would be within the bounds of propriety to suggest the presentation of written criticisms of the respective state laws. Dr. McBride, for instance, who is experienced in using the New Jersey law which has been referred to repeatedly as one of the best in the country, might have

some suggestions to make that would render that law even more nearly ideal; Dr. Behrend has already outlined suggestions for improving the Pennsylvania law; Dr. Hourigan might have suggestions to make which would bring the New York law into more nearly perfect form. If these gentlemen would all submit their criticisms of their own state laws to this Conference, and somebody might then digest those laws and the submitted criticisms, an effort could be made to draft a law that would be reasonably idealistic for the entire district, and this knowledge could be disseminated through our medical journals with the hope of ultimately effecting a uniform condition over this large territory. That would be in accord with one of the primary objects of organizing this Conference. Would it be possible to have such criticisms submitted, not now but later, to the officers of the Conference for the purpose mentioned? Then, those of us who are engaged to present this matter before our respective state societies would have a definite point to work for, and those who are watching legislation in these states would know what to favor or oppose, with the idea always in mind of ultimately bringing about uniform conditions.

Dr. Morrison: It seems to me that this Conference is measuring up to expectations, but we must remember that it has no legal organized standing and I can see that Dr. Reik's suggestion might run into considerable expense. I suggest that we go before our respective state societies, present the results of this Conference and ask permission from each state society to have these discussions printed and distributed.

Dr. Hourigan: I might suggest that the National Industrial Conference Board got out some 3 or 4 years ago "The Medical Aspect", which is a book covering the whole medical view of the Workmen's Compensation Acts of the United States. This book is entitled "Workmen's Compensation Acts of the United States—Medical Aspect". It is a research report, number 61, gotten out by the National Industrial Conference Board of New York, with an office at 10 East 39th Street. There are some other books of interest gotten out by the Labor Department in Washington, covering the compensation laws of this country and Canada.

Dr. McBride: One of the criticisms of our law that I would submit concerns the presentation of doctors' accounts. The employer often complains—"we didn't hire this doctor". But, there was nobody to take care of the patient unless some doctor assumed the task. I would make it impossible for the employer to use that defense; the injured person must receive attention and treatment just as soon as his condition is discovered or as soon as he applies for relief. It has not amounted to a serious difficulty with us because we have replied to the employer, "if it is not strictly a legal obligation it is surely a moral one and unless you pay you can not expect any sympathy from us", and we usually make them pay the bill. In New Jersey we have received great aid from the labor organizations and from the welfare organizations in having the original compensation law improved. We have gone to the public preaching the gospel of justice and we have received the support of these organizations in procuring legislation that would be fair and just.

Dr. Lawrence: At the risk of unduly lengthening this discussion, I would like to endorse Dr. Reik's suggestion. I believe that a concrete summary of the criticisms and suggestions made



here, if simply mimeographed and distributed to the officers of the 3 state societies would be of great value. We should not lose the opportunity to secure the invaluable criticisms and suggestions of Dr. McBride and Dr. Hourigan and others who have discussed this subject.

Dr. Shoemaker: I feel that the suggestion is very timely and that it should be put in effect. I do not know that we ought to hesitate on the score of expense; we shall spend some money anyway and we might as well spend it so as to get some benefit out of it. I really believe that the suggestion made by Dr. Reik is very good and I understand Dr. Morrison's suggestion to be merely an amendment as to how we should go about it, at to whether we should ask the state societies to specifically ratify the action. If anyone feels that he would like to make a motion to work out the proposition presented by Dr. Reik, I will be glad to hear him.

Dr. Morrison: Mr. Chairman, I move that we go before our state medical societies and explain the importance of these conferences, the mutual importance to the profession in the 3 states, and suggest that they give us the power to print the results of the conferences at the expense of each state society, so that the expense is carried for each meeting by each state.

This motion was seconded by Dr. Albertson and unanimously adopted.

#### Uniformity of Medical Practice Acts.

Chairman Shoemaker announced that the next subject for discussion would be "What Can Be Done to Render More Uniform the Medical Practice Act", and that this discussion would be opened by Dr. Rypins.

Dr. Rypins: I think we may have to give some consideration to the question whether it is desirable and advisable to make the state medical laws uniform. The fundamental and predominant object of the Medical Practice Act is to protect public health; any other object of the Act is secondary. The general way in which all medical acts in this country have functioned has been to set up standards of medical education before practitioners may be licensed to practice medicine. You all know how these standards have gradually developed to the present requirements of 2 years of college, 4 years of medical school, 1 year of internship and a final state board examination. Since we now have adequate educational standards, we have felt that the next step should make the law function so that no one may practice medicine who has not complied with these educational standards, and it is with the realization that this has been the weak point in medical practice acts, certainly in New York State, that we have recently amended our law. In order to prevent unqualified persons from practicing we find it necessary to set up the machinery for policing the practice of medicine in New York State. Our first step toward developing a practical plan is to require the annual registration of all physicians. Pennsylvania was a year ahead of us in this and I want to thank Pennsylvania for having passed her Annual Registration Act because it made a very valuable argument in helping to pass our bill. The fees of registration will go into our fund for enforcing the act and by receiving this money from the profession we avoid an annual struggle with the Legislature to secure weapons of war; our funds will come in whether the Legislature is favorable to legitimate medicine or not. We shall probably have a

working fund of about \$50,000 a year. The Educational Department will publish annually a list of physicians qualified to practice in the state, and the burden of proof will then fall upon any physician whose name does not appear on that list.

Another point which we feel is going to help make our law effective is taking the prosecution out of the hands of local district attorneys and placing it in the hands of a Deputy Attorney General whose whole time will be given to the prosecution of illegal practitioners. Still another part of our armamentarium which promises to be valuable is that it now becomes prima facie evidence of the practice of medicine if an individual hangs out a sign with the title "Doctor" or by any means or methods holds himself out to the public in any way as being a doctor of medicine. A fourth point relates to advertising; any type of fraudulent or misleading advertising will constitute a misdemeanor; we have had so much trouble in our state with such advertising that we felt it necessary to constitute it a misdemeanor.

We have added 2 experimental clauses to our bill, which we have very great faith in but as yet have not had the opportunity to try out. The first is the so-called Grievance Committee, and is an attempt to show the public that the medical profession is not only desirous of prosecuting irregular practitioners but is determined to clean its own house. This committee consists of 10 members appointed by the various medical societies who shall hear charges against any duly licensed physician for irregular practice of any character and shall recommend to the board the proper discipline even to revocation of the practitioner's license. This committee is also empowered to adjudicate any quarrel between physicians or between a private individual and a physician, and it is hoped by this means to avoid a great many unpleasant squabbles and prevent a great many suits for malpractice.

The second experiment deals with the popular and probably legitimate demand on the part of the public and the physicians for a type of practitioner who is not a regular doctor of medicine; this is the so-called physiotherapist, a man who knows how to properly employ certain physical therapeutic measures but who does not hold himself out to diagnose disease conditions nor to be responsible for their treatment. We have laid down educational standards controlling the licensing and registration of physiotherapists and we have said that they shall not be authorized to use drugs or to practice medicine as defined in the law, except to treat disease under the supervision and under the direction of a duly licensed physician. The physiotherapist will have to show a prescription from a physician ordering the manipulative treatments that he gives; being in this respect similar to the pharmacist.

These are, as briefly explained, the changes in our Medical Practice Act and if there is to be a uniformity of state laws I commend these to your consideration. I think we are the sixth or seventh state to adopt Annual Registration, and I think New Jersey will have to adopt a similar law; and I hope she can do so without paying too high a price for it.

Dr. Kelley: When I received the invitation from Dr. Hammond to be present at this Conference, his letter stated that one of the topics for discussion would be "What Can Be Done to Render More Uniform the Medical Practice Acts in These Three States". The only way in which the 3 acts

could be made uniform would be to have them all made from the same model, which would seem to me hopeless and impossible. The next best procedure, to my mind, is a liberal interpretation on the part of the respective boards, of the law which governs them. By that I mean an interpretation of the spirit of the law and not necessarily of the letter.

Dr. Kelley then discussed the recent dispute between the boards of examiners of Pennsylvania and New Jersey with respect to the laws of those states and the interpretations of those laws by the respective licensing boards, stating that the controversy was largely a matter of interpretation and that the 2 boards should exhibit greater faith in each other with reference to the maintenance of standards. There would be no danger of standards being lowered if the state authorities would coöperate in application of the law and in the adjustment of technicalities. Summing up, he presented 3 points:

(1) It would seem a hopeless and impossible task to make medical practice acts uniform, and even if uniform they would be subject to different interpretations by different boards and different Attorney Generals.

(2) If reciprocity is established it should be one of good will, and interpretation of the law should be a broad one and insistence should not be made by one board that its way is the only right way and that its rules are the only proper standards.

(3) There is far more reason for the New York and New Jersey boards to disagree because of the actual laws, but their differences have been easily adjusted. If the Pennsylvania board will interpret the spirit of the law, as the New York board has done, there will be no controversy at all.

Dr. Hillegas: I shall speak principally upon the desirability of uniform medical laws rather than on the method of procuring them. I want to express to New York our appreciation of the kind words in commendation of our registration act. It has worked out practically just as it is going to do with you. I am only sorry that we did not carry out our original plan for a \$2.00 instead of a \$1.00 registration fee. The present income does not give us sufficient funds for the policing we should like to do. I am very much interested in your provision for a Grievance Committee and I am quite sure that placing prosecutions under direction of the Attorney General, instead of County District Attorneys, will be productive of good results.

I am rather unwilling to reopen the subject of reciprocal relations between New Jersey and Pennsylvania; I simply want to say that there never was anything personal meant in the controversy. Pennsylvania has legal contractual reciprocity with 33 states and we have exactly the same rules and regulations in force with all of the other 32.

Now it seems to me that medical education and the laws pertaining thereto, the granting of licenses to practice medicine, is a state proposition just as it is in any form of education, and is not an intersectional nor a national question, and yet we can by these conferences propose alterations in the general laws which might add to the value of the general results and the proposition I am going to suggest is this: There is a meeting every March in Chicago of the Federation of State Boards of the country and the study of uniform medical laws should really go finally to that body, and if this Conference is in earnest I think we

might provide a committee of one member from each state to draw up a schedule of the uniform medical laws which we think would be most sound, present the best standards and the best protection, and present it by request of this Conference to the national meeting in March. There are several things of value that might be gained through uniform laws; and I do not mean simply uniform laws of these 3 states closely related geographically, but I mean of the entire United States. One of these is National and State Endorsement of Licenses; which it seems to me would be a great advantage as it would smooth out a lot of detailed problems that require adjustments by the various state medical boards and which often cause applicants for license to feel that they have met with injustice.

Dr. Hillegas then reviewed the many points of difference in the medical practice acts of different states, and the difficulties that would be met with in striving for uniformity, and concluded with the statement that something might be gained by securing uniformity in these 3 states which would materially affect progress toward national uniformity.

Dr. Reik: I am sorry to have to disagree with my colleague from New Jersey who has stated that it would seem useless to attempt to secure uniform laws and that if we did succeed in that we could not secure uniform interpretation. His presentation of the New Jersey case and his argument show the need for just that uniformity, and his concluding remarks constituted a plea for uniform and harmonious action.

I think Dr. Hillegas has the right idea of it. Of course there are many difficulties in the way, even in a limited territory like that of our 3 states, but if we could effect it in this territory we should be making a great deal of progress toward securing a like national result. It has been said here that the medical population of these 3 states is about 20% of the medical population of the United States. Certainly if that proportion of the profession can agree upon a uniformity of laws and can bring them into effect it would have a great deal of weight with the law making powers of the other states. Incidentally, that theory has been exemplified today in what Dr. Rypins said about the aid it was to New York to be able to say that Pennsylvania had enacted the Annual Registration clause in the Medical Practice Act.

I would like to ask Dr. Rypins one question: Do I understand him to believe that under the new law in New York it will be possible to successfully prosecute persons as illegal practitioners of medicine merely on the basis of their having exhibited a sign bearing the title "Doctor"? That clause of the New York law does not seem to me explicit; there is a confusing sentence which says that it shall be "presumptive evidence", and "that it shall be necessary to prove in any prosecution or hearing only a single act prohibited by law". In our state a somewhat similar provision in the law has been interpreted by the courts to require definite proof of actual practice—proof that the alleged doctor has actually treated 3 patients.

Dr. Rypins: Our law means that either the display of a sign or the actual treating of a patient shall constitute the practice of medicine and that it is only necessary to prove one or the other offenses to constitute a misdemeanor. Unless the person whose name is on the sign can show that he is not responsible for its display he is guilty of practicing medicine and that alone constitutes a violation of the law.

Dr. Rypins expressed doubt as to the desira-



bility of working for a uniform National Medical Practice Law, because of marked differences existing in different parts of the country. He felt that the level of intelligence was decidedly lower in some parts of the country than in others and that any uniform law would only be obtained by compromising down to the claims of a population with lower medical standards than exist in these 3 states.

### Concluding Business.

When the Chairman called for the next topic, "The Qualifications of Nurses and the Regulation of Their Relationship to the Profession", Dr. Morrison, who was to have opened the discussion, suggested that inasmuch as the hour was late it might be well to defer consideration of this subject until the next Conference and to have it placed first on the program of that meeting.

Dr. Morrison's suggestion was adopted.

Dr. Reik: Is there any decision to be made as to when and where the next session shall be held? I think it might be well for us now to consider the question of organizing these conferences on a permanent basis. As the idea originated, the "Conference" was rather a loose organization suggested for the purpose of bringing together those officers of the 3 societies who have to do with executive work, and I think it might be well to let it stand on that rather informal basis: The basis of organization might be the Presidents, Recording Secretaries, Executive Secretaries, Editors, and Chairman of Legislative Committees; in which ever state the meeting is held the President of that state society should be the presiding officer and should have charge of the arrangement of the program—being at liberty always, of course, to call into the Conference any person having authoritative knowledge upon subjects we desire to consider. It might, however, be well to have somebody delegated as secretary of the Conference who can serve as a permanent link between the alternating State Conferences, who will keep permanent records and "carry on" from one session to another, and be associated with the presiding officer in the preparation of programs.

I had these points in mind to suggest for your consideration. We shall be very glad to have you come to New Jersey for the next Conference, and I would like further to recommend that we hold 3 sessions per annum; one early in November, because we are then getting started upon the winter's work; one in February, because that is about the middle of the term of state legislative bodies; and the third in May, to take account of the year's progress.

Dr. Lawrence: I heartily endorse the plans suggested by Dr. Reik and move their adoption.

Dr. Lawrence spoke enthusiastically of the success already attained by these Conferences and mentioned some additional topics that might be considered at future meetings.

Dr. Albertson: If there is no further discussion, Dr. Reik's suggestions will be submitted to vote.

The motion to adopt these suggestions was unanimously carried upon motion of Dr. Hammond, seconded by Dr. Lawrence, Dr. Reik was elected Secretary of the Conference.

Upon invitation of Dr. Reik it was decided to hold the November session in Atlantic City.

Dr. Fisher moved a vote of thanks to the Pennsylvania representatives for their hospitality and for the excellence of the program prepared, and his motion was unanimously adopted.

The meeting then adjourned.

## County Society Reports.

### ATLANTIC COUNTY.

#### ATLANTIC CITY HOSPITAL.

Joseph H. Marcus, M.D., Secretary.

The monthly meeting of the Atlantic City Hospital Staff was held at the Nurses' Home, South Michigan Avenue, August 13. The meeting was called to order by President Dr. Richard Bew at 8:30 p. m. Those in attendance were: Doctors Bew, Senseman, Kaighn, Carrington, Pennington, Marcus, Darnell, Scanlan, Cheeves, Ireland, Subin, Kilduffe, Irwin, Conaway, Bossert, Mason, Davidson, Poland, Quin, Andrews, Allman, Walker, George, Rosenberg, and Town.

Following the report of the Intern, Training School and Building Committees, Dr. Carrington discussed the advisability of the proper method for referring dispensary patients who either had their own physicians or who could be referred to other physicians for treatment. After a general discussion it was resolved that the resident physicians and nurses in the dispensary refer cases to the family physician or if these patients are strangers or had no physician, they were to be referred for treatment to the chiefs of the dispensary departments. This resolution was unanimously approved.

Dr. Theodore Senseman read the following letter from the board of Governors, which is self explanatory:

Atlantic City, N. J.

August 12, 1926.

Dr. Richard Bew,  
1217 Pacific Avenue,  
Atlantic City.

Dear Dr. Bew:

At a regular meeting of the Board of Governors of the Atlantic City Hospital held Wednesday evening, August 11, 1926, the following resolution was unanimously carried:

"Be it resolved by the Board of Governors of the Atlantic City Hospital that Doctors Bew and Senseman are authorized to go to the next meeting of the Atlantic City Hospital Staff and insist that all doctors cooperate with the hospital management relative to the chronic cases that may be brought into the hospital during the busy season, so that any doctors who have operative cases which could wait until September or October for attention should so defer them.

"Be it further resolved that no operative cases be brought to the hospital during the summer months, or any other cases, excepting absolute necessities."

Very truly yours,

John J. Smith.

He urged the members of the staff to cooperate to the fullest extent and extend their efforts as efficiently as possible in alleviating the hospital from an excess of unnecessary work during the summer months.

The secretary then read a letter from the Board of Governors as follows:

Atlantic City, N. J.

August 13, 1926.

Dr. Joseph H. Marcus, Secy.,  
Atlantic City Hospital Staff,  
Atlantic City, N. J.

My dear Dr. Marcus:

At a regular meeting of the Board of Gov-

ernors of the Atlantic City Hospital held August 11, 1926, the Board concurred with the Staff in its recommendations as follows:

(1) That Dr. Edward F. Uzzell be allowed the privilege of doing simple appendectomies and other laparotomies not of a complicated nature.

(2) That Dr. James H. Mason be made an Associate in Surgery.

Very truly yours,

John J. Smith.

The secretary also read a communication from Dr. J. Carmack, D. D. S., in which he applied for appointment to the dental clinic of the Atlantic City Hospital. This letter was referred to the Chief of the Dental Department, Dr. B. B. Filer.

Dr. J. Ward Scanlan, President of the Atlantic County Medical Society, read a letter concerning group insurance which is accorded to the members of the Atlantic County Medical Society in good standing. He urged the members of the staff to take advantage of this offer, and asked that applications be sent in care of his office.

The scientific program followed and was presented by Dr. William J. Carrington, which embodied a report of the Gynecological Service from December, 1925, to March, 1926, inclusive:

"Last winter's gynecological service was characterized by a greatly diversified group of highly interesting cases, interesting both from the standpoint of operative technic and in their broader general medical aspect. It is this latter phase, rather than the technical details that I would like to emphasize in this report to the general staff.

"In all there were 81 admissions, 65 of whom were operated upon. If this hospital included in its report of operations the number of operations performed rather than the number of patients operated upon this total would be almost double. It is the practice of some institutions, for example, to report as two operations, hysterectomy and appendectomy, even though performed on the same patient at the same time. If this were the custom here there would have been 125 operations instead of 65. There were four deaths; one of which was due to operation and three of which would have occurred, operation or no operation. These four cases will be reported in detail presently. The 81 admissions were referred to the service by 52 different doctors. This is gratifying in that it shows that the gynecological service is generally used and widely patronized by the profession. There were 28 consultations. The medical, surgical and pathological chiefs were unusually helpful. I doubt if any institution in the county has better team work than the Atlantic City Hospital. The esprit de corps was excellent. The associate, Dr. Uzzell, and the residents, Drs. Poland, Stillwell and Radom all gave splendid service. The management of the hospital under Miss McGurran, the floor nurses and the operating room staff have never been better. With all parts of the machine working smoothly a four months' service in a busy hospital such as ours is a real delight. A word of commendation should be given to Miss Theresa McGurran and the highly efficient manner in which she keeps the records of the hospital. They are always easily accessible; a real essential in scientific medicine.

"There were 13 abortion cases, 2 of which recovered without interference. In our judgment 11 needed operation. They are all recorded as D and C, but none really had a dilatation and

curettment. The working rule followed was this: A patient with continued bleeding and a temperature of 100 or less had a gentle dilatation, if the cervix was not already open, and a cautious curettage with a dull irrigating curette. The endometrium was then wiped with gauze and swabbed with equal parts of iodine and carbolic acid and packed with iodoform gauze.

"On the other hand in the presence of continued bleeding and fever the cervix was dilated most cautiously, if it was not already dilated, and the placenta was removed with finger or placenta forceps. The cavity of the uterus was then wiped, swabbed and packed.

"Medical schools teach a "hands off" policy in incomplete abortions, but the Playground of the World has become the dumping ground of Philadelphia and New York abortionists. For us to adopt a watchful waiting policy would clutter up our wards to the exclusion of worthy cases. All of us appreciate the danger in infectious cases of curfetting away nature's protective barrier, but we also realize that when retained secundines cause continued bleeding and sapremia their gentle removal is followed by prompt and complete recovery.

"Case No. 1253.—Mrs. H. H. was sent in from Ocean City two days after the rupture of a two months' ectopic gestation. She arrived in a state of profound hemorrhagic shock and was given stimulation, an intravenous saline infusion and adrenalin injection into the heart before I saw her. There is a difference of opinion in regard to the treatment of ruptured ectopic. Some believe it is foolhardy to rush in before the patient has reacted from shock. My own belief is that the treatment is immediate salpingectomy or salpingo-oophorectomy, no matter what the condition of the patient. In this particular case there was no choice in the matter as the patient had already had a saline transfusion. To have waited would in all probability have meant more internal hemorrhage.

"The patient was reinfused with the blood from the abdomen. 500 c.c. were strained through 4 layers of sterile gauze, 100 c.c. saline was added, and the 600 c.c. was given intravenously. The patient received coffee and whisky enema; her legs were bandaged; she was placed in reverse Fowler's position. She reacted from the operation, but died on the fifth day from bronchopneumonia. The question arose whether the pulmonary signs were really pneumonia or embolism from her reinfusion. Dr. Marvel, who saw this patient several times in consultation, based his diagnosis of pneumonia on the slow onset of the lung lesions, their wide distribution and the absence of pleurisy and hemoptysis. Unfortunately postmortem examination was refused.

"Case No. 169.—Mrs. A. R., colored, aged 23, was admitted January, 1926, with nephritic toxemia of pregnancy. She had one child 3 years old. The pregnancy, birth and puerperium were normal. A careful history failed to elicit any cause for nephritis. The last menstruation occurred in August, 5 months prior to admission. She began to feel ill almost at once, but did not seek medical aid. Vomiting, headaches and substernal pain began and grew progressively worse. For 12 days before admission she retained no food at all, and the vomiting had been constantly bloody and projectile. Examination on admission showed a poorly nourished dehydrated multipara, 5 months pregnant. Medical examination by Dr. Scanlan revealed a toxic myocarditis with numerous râles at both bases. The urine continued 30 mgm. % albumin, innumerable hyaline casts and a trace of acetone, probably starva-



tion acetone. P. S. P. for 2 hours was 7%. The blood showed 5,150,000 reds; 12,650 whites; and 75% hemoglobin. Wassermann was negative. The urea nitrogen was 48 mgm. %, 4 times the normal amount retained. Blood creatinin was also high, 2 mgm. %.

"The patient was given calomel and salts, colonic irrigations, lavage, hypodermoclysis, continuous proctoclysis of glucose and soda bicarbonate, digitalis and a salt free diet, although there was no edema.

"In spite of this eliminative treatment she grew progressively worse. The vomiting continued, periods of semi-coma were alternated with irrationality. The albumin increased from 30 to 250 mgm. %, and the blood pressure from 140 to 190. After consultation it was decided to empty the uterus. This was done on January 30 after 2 cervical packings with the insertion of an intra-uterine bougie with rupture of the membranes. The 5½ months' fetus was still born, macerated and the placenta showed fatty degeneration.

"After delivery the patient showed no improvement, but grew gradually worse. Vomiting continued and coma deepened, due either to minute cerebral hemorrhage or edema. She had to be restrained. She died on February 5 of uremic coma. Postmortem examination was refused. It is interesting to note that the blood urea rose from 48 mgm. % before delivery to 116 mgm. % after delivery. Even more interesting was the behavior of the blood creatinin. Before delivery it was 2 mgm. % and after 6.0 mgm. %. Folin first proved that the amount of creatinin excreted in the urine of a normal person on a meat free diet is independent of both the protein in the food and the total nitrogen of the urine. Creatinin, therefore, is not derived from the diet but is evolved from muscular metabolism. All muscles produce creatin and then convert it into creatinin which is carried by the blood stream to the kidneys where it is readily eliminated through normal renal epithelium. If the kidney function is impaired so that the blood creatinin accumulates to more than 4 mgm. % per 100 c.c. the termination is almost invariably fatal. Our patient had almost no muscular exertion, and yet her creatinin rose from 2 to 6.9 mgm. %.

"Case No. 259.—Mrs. E. H., married, aged 71, white, was admitted for the relief of complete uterine prolapse of 10 years' standing. For the past month there had been a discharge of blood from an extending ulcer on the cervix. There is nothing in her history of particular interest except that she had 4 children all born without difficulty and had never worn a pessary.

"Upon examination the uterus was found completely prolapsed. The right side of the cervix was the site of an indurated ulcer the size of a silver dollar. It bled upon touch and was surely malignant. Physical examination showed her to be a poor risk. All superficial arteries were sclerosed. The second sound at the aorta was quite accentuated. The first sound over the mitral area was replaced by a harsh blowing murmur transmitted to the axilla. Every fourth to tenth beat was punctuated by an extra systole. The apex was in the anterior axillary line. The B. P. was 220/110. The urine showed 40 mgm. % and 14 hyaline casts per field. P. S. P. was 30% for the two hours. Blood urea was 14.4 mgm. %, and creatinin 1.5 mgm. %; the Wassermann was negative. In preoperative consultation Dr. Bew found poor expansion of the right lung posteriorly due to a spinal curvature, and he prophesied a post operative pneumonia in this location. In spite of the poor

risk, in view of the cancer and with the full understanding of the family, a vaginal hysterectomy and perineorrhaphy was done January 21. There was little shock but for 4 days there was almost complete suppression of the urine. It began to appear as the ureters had been severed or tied. On the fifth and sixth days, however, she voided 16 and 23 ounces respectively. But pneumonia developed at the base of the right lung, and she died on the 26th.

"Microscopic examination of the uterus by Dr. Kilduffe showed fibroadenocarcinoma of the cervix.

"Case No. 487.—Mrs. M. B., aged 23, colored, was admitted February 2, with pelvic peritonitis due to the right tubo-ovarian abscess. Her family history negative. She had the usual diseases of childhood; menstruation began at 13 and was normal in every way until the onset of the present trouble. Two children were born normally 4 and 3 years ago. Two years ago she developed a severe vaginal discharge, purulent in character and associated with dysuria. During this time she has had several attacks of fever with pain in the lower abdomen. During the past 2 years she has had profuse and prolonged menstruation, once lasting over three months.

"The present attack started 2 weeks ago. She has been in bed ever since with fever, constipation, pains in both iliac regions and backache.

"On admission her temperature was 101. The head and chest were essentially normal. The lower abdomen was rigid and tender. Morris's points were sensitive. Upon vaginal examination the perineum was badly torn down to the sphincter. The cervix was the site of erosions, bilateral lacerations and hypertrophy. The uterus was fixed and the adnexa were tender but not outlineable. The blood showed 4,700,000 reds, hemoglobin of 80% and 11,500 whites, 80% of which were polymorphonuclear. The Wassermann was negative. Urinalysis showed innumerable pus cells and less than 8 mgm. % albumin. P. S. P. was 30/50, a total of 70.

The patient was placed in the Fowler position with ice to the lower abdomen. She was given hot douches and the peritonitis was allowed to subside. Her temperature ranged from 102 to 99 for 9 days, and then remained normal. In order to test her resistance to her own infection another vaginal examination was made and with considerable force the uterus was moved about. This procedure did not relight her infection so on February 11, she was operated upon. Both the vaginal and abdominal fields were prepared with 5% picric acid in 70% alcohol. She had a D and C; Sturmdorf's amputation of the cervix; a perineorrhaphy. Upon opening the abdomen there were numerous recent adhesions all through the pelvis. These were released and the right tube and ovary which together formed an abscess were removed. The appendix appeared normal, but it was removed and the wound was sutured without drainage.

#### Laboratory Report:

"Gross Appearance: Specimen consists of a portion of the cervix measuring 2.5 cm. and cutting with increased resistance. Formalin fixation; frozen sections.

"Microscopy: Section show the typical picture of a chronic cervicitis with associated fibrous and glandular hyperplasia.

"Gross Appearance—Specimens consist of: (1) The appendix which measures 7 cm. in length and is somewhat fibrous and presents the

microscopic picture of a chronic inflammatory reaction. (2) The ovary which measures 4 x 2 cm. and, when cut, is cystic; there is no microscopic evidence of adenomatous or malignant changes. (3) The left tube which is the site of a chronic inflammatory reaction; microscopically diffuse and associated with fibrous hyperplasia.

"She reacted well from the operation but on the second day developed fever and pain in the right side of her back. Dr. Barbash found dullness and roughened breath sounds over the right base. High fever continued and on the fifth day her sclera became jaundiced. On the seventh day Dr. Bew made a diagnosis of pleurisy at the right base, and multiple abscesses of the liver due to an ascending infection. Two blood cultures showed staphylococci.

"On the 18th there appeared induration and tenderness of the labia and perineum. This was freely incised in the ward under gas oxygen anesthesia. But this made no change in her condition which became steadily more toxic. She died on February 20, 9 days after operation. Postmortem examination by Dr. Kilduffe showed the following:

"Body of an adult colored female. Age probably 30 years. Thin and slender build.

"There is a perceptible bile staining of the conjunctiva in addition to which there is some discoloration due to extravasation. There is a midline surgical incision extending from just below the umbilicus to just above the symphysis in the lower angle of which there is a bit of gauze drainage.

"There is a slight edema of the lower labium in which there is also a small incision.

"Chest Cavity: The heart presents no abnormalities. The right lung presents a very definite passive congestion of the lower lobe and on section there is some pulmonary edema. The upper lobe is normal. There are no pleural adhesions. A similar condition, although not so marked, is present in the lower lobe of the left lung. There is no evidence of tuberculosis nor are there any abscesses.

"Abdominal Cavity: The omentum is adherent to the peritoneal wall in the region of the incision and in the left pelvic fossa there has been a recent left salpingo-oophorectomy at the site of which there is a small collection of clotted and semi-fluid blood. Probably the greater amount of this is residual following the operation although there has been possibly a slight and transient oozing. The appendix has recently been removed and there are some slight adhesions in this area, and a slight inflammatory reaction. Both the omentum and the bowel in the pelvic fossae show some greenish discoloration, which is, in all probability, terminal in origin. The spleen is enlarged, very spongy and presents a peri-splenitis, and an interstitial splenitis. There are no splenic abscesses. Both kidneys are somewhat swollen and paler than normal and present the picture of a cloudy swelling very probably of toxic origin. There are no abscesses. The liver is about normal in size but distinctly bile tinged and when sectioned contains a moderately enlarged number of small purulent foci. These are not typical punctate abscesses but appear to be little localized collections of pus in the smaller vessels. They are restricted to the right lobe. There are no abnormalities of the gall-bladder.

"Tissue Examinations: Liver: Sections show diffuse cloudy swelling, many small areas of focal necrosis, and some interstitial fibrosis.

"Spleen: Diffuse cloudy swelling and perceptible interstitial fibrosis.

Blood Culture:

2/15/26: No growth.

2/19/26: Staphylococcus.

Liver abscesses:

Staphylococcus.

Bacteriology:

"Anatomical Diagnosis: Jaundice. Passive congestion of both lungs with pulmonary edema (lower lobes). Chronic peri- and interstitial splenitis; acute toxic splenitis. Cloudy swelling both kidneys (toxic nephritis). Multiple abscesses of the liver; chronic interstitial hepatitis. Terminal staphylococcemia.

"Discussion: The problem in this case revolves not so much around the cause of death as about the pathway followed by the infection. Forty-eight hours before death blood cultures were taken from which a growth of staphylococcus was obtained. The double finding eliminates a possible skin contamination and is corroborated by the presence of the hepatic abscesses. It is a matter for discussion as to whether the blood stream infection preceded or followed the hepatic involvement. In view of the fact that if the blood stream infection were the prior event there should have been multiple abscesses not only in the liver but in other organs, the more likely course of events was that the hepatic infection came first by lymphatic extension from the operative field, and that the invasion of the blood was secondary.

"Comment: During this patient's stormy post-operative course, it was my opinion that I had not waited long enough after her peritonitis before operating. In the light of the postmortem findings, however, with two positive staphylococcal blood stream findings and the development of cellulitis of the vulva, it is clear that this patient died of a lymphangitis originating in the perineorrhaphy wound and extending up to and involving the liver."

Dr. Carrington's excellent and comprehensive presentation was discussed by Dr. Theodore Senseman. Following generalized remarks, he particularly commented upon the course of treatment of Ectopic Gestation, advocating stimulation with operation, in proper combination. Dr. Conaway continued the discussion in commenting upon the procedure of injecting free blood from the peritoneal cavity back into the vein. He felt that this procedure has not been found practical in his own experience and he has therefore discontinued this course of therapy. The method of injecting whole blood was brilliantly discussed by the director of the laboratories, Dr. Robert A. Kilduffe, who stated that the intravenous use of blood depended upon the character of the blood at the time of operation, furthermore, that the danger lay in the injection of clots, rather than in the blood as a whole, especially if it be capable of carrying oxygen. Relative to a case report made by Dr. S. Barbash, Dr. Robert A. Kilduffe, director of Laboratories of the Atlantic City Hospital, expounded the following views to the Wassermann reaction in pneumonia:

"Pneumonia is one of the diseases in which high leucocyte counts are the rule rather than the exception, and while I do not recall having seen as high as 90,000 in pneumonia before, the count was carefully rechecked and we know it to be correct.

"The Wassermann reaction in pneumonia has always been a subject of interest as this is one of the diseases in which, during the febrile period, false positive reactions are known to oc-



cur with many of the methods in common use.

"This is not particularly remarkable. It is now well known that the Wassermann reaction is not a biologic but a chemical reaction and the majority of serologists are convinced that it is closely associated with, if not entirely dependent upon, the colloidal character and stability of the serum and body fluids.

"I have long felt that colloidal chemistry may hold the answer to many of the problems involved in pneumonia. There are few things more striking or dramatic than the crisis in pneumonia; one moment the patient is in extremis and gasping for breath; the next, he is a different person. There is nothing in the physical findings to explain the striking change in the clinical condition, there is nothing in the blood chemistry to furnish a satisfactory explanation of this startling and dramatic change. It seems, at least, possible—and I believe it probable—that the answer lies in some colloidal reaction of the blood or other body fluids.

"If this be true, then there is a logical explanation for the occurrence of positive complement fixation reactions in this disease without the co-existent presence of syphilis.

"My experience with Kolmer's method of complement fixation—the method in use in these laboratories—has convinced me that false positive reactions are exceedingly rare—if they occur at all.

"I have never obtained a false positive reaction with it in pneumonia in, perhaps, 50 or 60 cases and I reported last year before the Atlantic County Medical Society nearly 100,000 tests made under experimental conditions by 30 observers without false positive reactions occurring. Pneumonia was one of the diseases investigated.

"I am inclined to believe, therefore, that the positive reaction in Dr. Barbash's case was a true reaction. There is nothing remarkable in the fact that a negative reaction was later encountered without any treatment. Variations in the strength of the reaction in syphilis even from negative to positive without treatment were first noted by Craig some years ago and are common to the experience of serologists and syphilographers and their occurrence must be borne in mind by clinicians engaged in the study of syphilis."

The program was brought to a close by a symposium discussion of reinfusion by Drs. Bew, Carrington and Kilduffe.

Dr. Walt, P. Conaway brought up the question of purchasing radium. Dr. Bew recommended that the suggestion be relegated to the Board of Governors for further consideration.

The meeting adjourned at 11 p. m.

## MIDDLESEX COUNTY.

J. H. Rowland, M.D., Secretary.

The regular quarterly meeting of the Middlesex County Medical Society was held June 16, 1926, at the Perth Amboy Hospital. The attendance of 44 was an improvement, but should have been much larger. Not one member could afford to miss the paper of the afternoon. Dr. Wm. S. Bainbridge, of New York, presented a paper on "Cancer", which was exceedingly well prepared and presented, and judging from its enthusiastic reception it was closely followed and appreciated by the audience. Certain it is that those who missed Dr. Bainbridge's paper missed something worth while.

The next regular meeting will be held Wed-

nesday, September 15, 1926, at 4 p. m., at the Alumni House, Queens Campus, Rutgers University, New Brunswick.

A symposium on "Goitre" will be presented by Dr. Frederick H. Bothe (late of Mayo Clinic) of the Presbyterian Hospital, Philadelphia, who will present the medical aspects of the subject, while Dr. Edward Rose, of the University Hospital, Philadelphia, will present the surgical side. Two of our members have been asked to open the discussion and it is hoped that there will be a general participation in the discussion in order to insure another worth while meeting.

## In Lighter Vein

Sign in store window: "Don't kill your wife with hard work. Let our electric washing machine do the dirty work."—(Judge)

### Home from College.

Son (nervously)—"After all, Dad, the real thing in college is the social atmosphere. The real values lie in the social opportunities and—"

Dad (taking out check-book)—"What did you flunk in this time?"—(Brown Jug)

### One Thrill More.

"But", said the cautious screen star who was about to perform an apparently dangerous feat, "suppose the rope should break?"

"By George!" cried the director. "That's a good idea!"—(American Legion Weekly.)

### On the Leash.

The club addict was being brought to book by his neglected wife. "Have you no friends who spend their nights at home?" she asked coldly. "Why, yes," replied the sinner thoughtfully. "There's old Dash, who has been married ten years and never spent an evening away from home."

"Ah!" exclaimed the lady. "He's got some consideration for his wife."

"Not exactly," came the cynical reply. "He's got the rheumatism."

### Steppe by Steppe.

A Russian was being led off to execution by a squad of Bolshevik soldiers on a rainy morning.

"What brutes you Bolsheviks are," grumbled the doomed one, "to march me through a rain like this."

"How about us?" retorted one of the squad. "We have to march back."—(The Pointer.)

### The Human Dud.

While he was making his way about his platoon one dark night, a sergeant heard the roar of a "G.I. Can" overhead and dived into a shell-hole. It was already occupied by a private, who was hit full in the wind by the non-com's head. A moment's silence—a long deep breath, and then—

"Is that you, sarge?"

"That's me."

"Hot dog!" I was just waiting for you to explode."—(Everybody's.)

## Marriages.

**ELLIS-WEILL**—On July 18, 1926, in Paris, France. Dr. Arthur J. Ellis of 23 Milford Avenue, Newark, to Mlle. Madeline Lucie Jeane Weill of Paris.

**NOWREY-DAVIES**—On Aug. 18, 1926, Dr. Joseph A. Nowrey, Jr., of 921 Cooper Street, Camden, to Miss Edith Anne Norelle Davies of Camden.

**PAYNE-FITCH**—On Aug. 12, 1926, Dr. Guy Payne of Overbrook Hospital, Verona, to Miss Eloise Fitch, daughter of Mr. and Mrs. Fred Fitch of Jackson, Mich.

**AMBROSE-BOND**—On Sept. 1, 1926, Dr. Anthony Ambrose of 71 Congress Street, Newark, to Miss Margaret W. Bond, daughter of Mr. and Mrs. John W. Bond of Nesquehoning, Pa.

**CHIGER-KONKOSKE**—On Aug. 18, 1926, Dr. Alexander S. Chiger of 621 High Street, Newark, to Miss Genevieve Constance Konkoske, daughter of Mr. and Mrs. Anthony Konkoske of 194 Pierson Street, Orange.

## Death.

**FISCHER**, Dr. Armin, of 26 Hillside Avenue, Newark, died at his home on August 22, 1926, at age of 72 years from a cerebral haemorrhage.

## Personals.

Dr. and Mrs. David Hutchinson Crawford of 26 Elizabeth Avenue, Newark, sailed in August on the George Washington for France and England.

Dr. and Mrs. Frederick C. Horsford of 305 Belleville Avenue, Newark, are spending the summer at Point Pleasant. Dr. Horsford returns to town for a few days each week.

Dr. and Mrs. William Spickers of Paterson, N. J., have gone to California by the southern route. They will stop at the Grand Canyon, Los Angeles, Yosemite Valley, San Francisco, Portland, Vancouver and return via Canadian Rockies.

Dr. F. J. Krauss and family of Chatham are at the Metabetchonan Club, Kiskisink, P. Quebec, for the month of September.

Dr. Alvin Lippard of 209 Hollywood Avenue, Hillside, have been on a motor trip via the Delaware Water Gap to Lake George. He will stop at Spring Lake on his return.

Dr. George F. Corrigan of 344 Lafayette Street, Newark, has returned on the Leviathan from a tour of France, Germany, Switzerland, Italy and Austria. He visited many hospitals in those countries and spent the last two months studying in Vienna. Dr. Corrigan, who has now resumed his practice, sailed from New York April 27 with the Interstate Post Graduate Assembly of North America.

Dr. and Mrs. Francis J. Kerns of 566 Warren Street, Newark has returned from Europe on the Resolute. They visited France, Switzerland and Germany and were away five weeks.

Dr. and Mrs. J. Caldwell Morrison of 379 Seventh Avenue, Newark, have returned after visiting their daughter, Mrs. Herman Osgood of Gloucester, Mass., and motoring through New England. They were away a month.

Township Committeeman Dr. G. Wellington Campbell of Millburn has left for a motor trip through New England. Dr. Campbell expects to stop at various places in Maine. He will be away until early in September.

Dr. and Mrs. R. A. Schaaf and their family of 19 Bathgate Place, Newark, have returned from a six weeks' stay at Harpswell, Me. They will spend the rest of the summer at Oakhurst, their cottage at Lake Hopatcong.

Miss Suzanne Becker, daughter of Dr. and Mrs. F. W. Becker of 14 Clinton Place, Newark, has returned from High Point where she has been spending ten days.

Dr. and Mrs. C. H. Winch of 841 South Twelfth Street, Newark, have returned from a three weeks' trip through the West. They visited clinics in Rochester and St. Paul, and returned by way of the Great Lakes.

Deputy County Physician William M. Brien of 449 Main Street, Orange, has been recuperating at Ocean Grove and remained until Labor Day.

Dr. and Mrs. James T. Hanan and Miss Marcia Hanan of 11 The Crescent, Montclair, have returned from their summer home at Chatham, Mass.

Dr. H. A. Tarbell of 11 Pennington Street, Newark, the genial treasurer of the Society for the Relief of Widow and Orphans, has been avoiding the hot weather at home by making a cruise to Labrador in August.

Dr. and Mrs. Charles A. Schneider of 694 Clinton Avenue, Newark, and their daughter Dorothy have returned from a stay at Center Lovell, Me.

Mr. and Mrs. Edwin B. Hill and daughter of Roxbury, N. C., are visiting Dr. Wellington Campbell of Short Hills Avenue, Short Hills.

Dr. and Mrs. R. H. Dieffenbach, Jr., of 570 Mt. Prospect Avenue, Newark, and their daughter, Miss Anne Dieffenbach spent the month of August motoring in the Adirondacks.

Dr. Jacob Polevski of 682 High Street, Newark, who has been active on the medical staff of the Beth Israel Hospital for many years, left recently for an extensive tour to the Pacific Coast. He will be accompanied by Mrs. Polevski and by his mother, and while in Los Angeles will visit his two sisters and a brother. The party will return to Newark September 7. A "walk-in" surprise was tendered Mrs. Polevski Wednesday night at her home by about thirty friends.

Dr. and Mrs. L. L. Davidson and their son, Henry of 88 Clinton Avenue, Newark, have left on the Conte Biancamano for a trip abroad. They will visit Italy, Switzerland and France, returning September 12, on the Belgenland. Henry Davidson will then resume his studies at the Jefferson Medical School, where he is a junior.

Miss Helen Kerns, daughter of Dr. and Mrs. J. Kerns of 556 Warren Street, Newark, left for a motor trip through New England to Cape Cod. Miss Kerns, who is a sophomore at St. Elizabeth's College, expects to be away three weeks. Upon her return she will go to Deal Beach for the remainder of her vacation. Dr. and Mrs. Kerns are spending the summer in Europe.

Dr. and Mrs. Lazare Weiss and their son of 404 Bergen Street, Newark, returned August 7 from a trip to Michigan. They spent some time at Saginaw and Mt. Clemens and Mrs. Weiss is at present visiting a sister in Detroit.

Dr. and Mrs. H. S. Nash, who formerly made their home at 565 Bergen Street, Newark, moved last month to 865 South Eleventh Street.

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## THE TREATMENT OF BLADDER TUMORS WITH METAL SEEDS CONTAINING RADIUM EMANATION.

EDWARD L. KEYES, M.D.,

Professor of Urology, Cornell University Medical College, New York City.

Stenographic report of an address delivered at the 160th Annual Convention of the Medical Society of New Jersey, Atlantic City, June 18, 1926.

Gentlemen: Carcinoma of the bladder can be controlled. Indeed, we may as well admit that carcinoma of the bladder can be cured out—and this is a large “but”—carcinoma of the bladder cannot be cured in any large proportion of cases unless the surgeon treating it totally revises his point of view.

The surgical attack upon bladder carcinoma has in the past depended for its success upon a wide resection of the bladder which, if it did not kill the patient, left him with an even chance of dying later of his disease. But we now have in our hands an instrument whereby we can operate with negligible mortality, with a fair chance of destroying the carcinoma at once, and with an opportunity of checking and improving our results by subsequent cystoscopic treatments.

This is revolutionary, and revolutionary in the largest sense, for it means a total change of view. Hitherto we have been talking about control of bladder carcinoma and operating as though to cure it. Now we may think in terms of cure on condition that we persist in our treatment of the condition so as to control it.

Heretofore we have had a choice between resection, whether by knife or cautery, with its operative mortality of 10% to 20%; diathermy, with its slow healing, its danger of bladder perforation; and, finally, glass radium seeds, producing grave slough, tedious convalescence and sometimes a permanent ulceration comparable to the x-ray burns of the skin, with which we are all familiar.

The new metal emanation seeds of gold or platinum have changed the outlook completely. The encasement of the emanation in metal shuts off the destructive beta rays, while transmitting 10% of the gamma rays. Clinically, this amounts to minimizing slough and secondary infection and eliminating the intractable radium burn, which has been the bane of this form of treatment, without any notable diminution in the radium destruction of tumor tissue. Indeed, the elimination of slough permits the operator to increase the strength of the capsule from the customary 0.2 to 0.3 m.c. to 2 or 3 m.c., though the physicists seem to regard 1.5 m.c. as the ideal strength. Thus the intensity of tumor destruction is actually increased to such an extent that the large intravesical capsules of filtered radium emanation we formerly used may be entirely discarded.

Furthermore, the implantation when done suprapubically may be made almost or quite entirely in the depths of the base of the tumor or in the bladder wall about its base. This excites no bleeding, and if the projecting portions of the tumor are removed after ligation of the base, a clean wound is left. The suprapubic incision in the bladder may be sutured

without drainage, and the patient may be dismissed from the hospital in 2 or 3 weeks.

#### SUPRAPUBIC TECHNIC.

I shall not bother you with details about anesthesia beyond saying that either reinforced sacral or spinal anesthesia may be used.

For preparation, I inject into the bladder as the patient awaits his operation about 25 c.c. of 1:1000 acriflavine as an antiseptic, leaving the catheter in the bladder until the patient is on the table. Then, after the suprapubic incision has been made to the bladder wall, air is injected on top of this pond of acriflavine without fear of air-embolism through the prostatic veins.

Then the bladder is opened by cutting through the muscle, held with Allis clamps, until the mucosa is reached; this appears as a bubble filled with air. I then let the air out of the catheter; the bubble collapses. Holding its circumference with Allis clamps, and with a knife in one hand and the aspirating nozzle in the other, I plunge the knife through the mucosa and immediately follow with the aspirator, and not a drop escapes from the bladder to soil the wound. Then I proceed to put in the mechanical retractors, or others if these are inappropriate to the case in question, and expose the tumor. The patient is put in the Trendelenburg position at about this time in the operation.

With the aid of a bladder light and a stick-sponge to mop out the few remaining drops of blood or urine, the interior of the bladder is carefully inspected and the implantation of radium seeds is planned as follows:

First, large projecting tumor masses are seized about the neck with a small angular forceps, lifted, and tied off with No. 1 plain catgut, and the outlying portions cut away. They may be burned away with the actual cautery or the fulguration point, if you have any prejudice against cutting them away.

Secondly, small papillary tumors are destroyed by fulguration or by actual cautery.

Thirdly, ulcers, the bases of ligated tumors, and areas of densely growing papillomatosis are left for radiation.

Radium emanation seeds of gold or platinum, each containing 1.5 to 2.5 millicuries of emanation are implanted by special breech-

loading needles at a depth of at least 0.5 cm., and at a distance of at least 1 cm. (half an inch) from each other throughout the tumor root.

No special implants need be made to take care of small outlying papillary tumors which have been cauterized.

I have never implanted more than 10 seeds and should hesitate to advocate the use of more than twice this number.

The operation is then over; the retractors are removed; the suprapubic incision is closed, preferably by a Lower suture (a subcuticular suture running along the bladder mucosa, and then an over-and-over suture through the muscle, coming back to the point of origin). That is of plain catgut and is backed by a Lembert suture of No. 0 chromic gut. The bladder is not drained.

The gauze pads that have been in the abdominal wall are then removed and the abdominal wall is closed around a small cigarette drain.

#### POST-OPERATIVE CARE.

No in-dwelling catheter is used. The bladder is emptied by catheter at bed-time and the following morning. Thereafter the patient will usually void urine spontaneously. If not, the usual postoperative catheter precautions are observed.

The cigarette drain is removed on the third day.

Between the fifth and the tenth days a radiogram is taken, to prove the presence of the seeds. No matter how carefully you put them in, some of them will fall out. In order to test how much radium treatment you have actually given the patient, inasmuch as the effect of the emanation continues for 5 days, you test the presence of the seeds by taking an x-ray of them; they show perfectly well, being metal at the end of the fifth day.

The operator will do well to cystoscope his patients every month or so after operation though until at least 3 months have passed he may not be able to distinguish with certainty between tumor and effects of radium. Snippings obtained by cystoscopic forceps may or may not help.

Recurrences, if amenable to treatment a



all, are controllable by cystoscopic fulguration or application of radium.

I have operated on 8 cases in this way in the past 6 months and but 1 has leaked a little, and he was dry at the end of 2 weeks.

#### CYSTOSCOPIC TECHNIC.

Through the cystoscope the application of radium seeds is made in a much more homeopathic fashion. One or 2 seeds per tumor suffice and I confess to a preference for 2, only because the stay of cystoscopically applied seeds in the tissues is so uncertain.

Cystoscopic irradiation should be repeated at intervals of from 2 to 6 weeks.

Sacral anesthesia is desirable and may be employed as an office procedure if the parasacral punctures are omitted.

Post-cystoscopic radiograms will show the spacing of the seeds to be very inaccurate and that some of them have fallen out. This radiographic control is therefore peculiarly useful after cystoscopic radium therapy.

The treatment of recurrences is the same as after operative radiation.

#### CHOICE OF METHOD.

Dr. Barringer has recently argued in favor of the cystoscopic route for the application of emanation seeds. My experience is too small to permit of any final conclusions, yet I venture to disagree with him. It is true, I have once risked treating by cystoscope a bladder so full of papillary carcinoma that even under adequate spinal anesthesia I could not make head or tail of it. Yet my few suprapubic cases have given me only joy; my cystoscopic treatments have been trying and in detail unsatisfactory because of seeds badly placed and seeds falling out.

The control of bladder tumors will be successful in direct proportion to the promptness with which treatment is applied. We are dealing with cancer. In case of doubt, play trumps—suprapubically.

#### CLINICAL RESULTS.

Since November, 1925, I have employed this treatment on 13 cases. The patients are all alive, have suffered little more than the inconvenience of cystoscopy or suprapubic section with primary suture. Eight were cut and think themselves well, though 2, at least, were

insufficiently radiated to control the tumors. Ultimate results will be reported later.

The following cases illustrate the course of treatment:

Case 1: Operation successful. Male, aged 44—cystitis over a year. On October 27, 1925, after cystoscopy (which showed an extensive papillary outgrowth, projecting very little, but with a base estimated at 3 by 2 cm. behind the right ureter) the bladder was opened suprapubically and 10 steel tubes (I didn't have the platinum tubes then) containing radium element were implanted into the tumor, which was found to extend right across the fundus, back of the trigone, and about 2 cm. up the wall of the bladder, a roughly triangular area about 4 by 4 cm. in base and elevation.

The tubes were left in 5 days. They were taken out through the suprapubic opening. (These steel tubes had to be removed on strings.)

Pathologic report: papillary carcinoma.

The convalescence was uneventful. The man said the most distressing thing about his operation was the pain of having to lie upon his sacrum, through which we had done a sacral anesthesia. In March, 1926, cystoscopy was negative.

Case 2: Operation fails; cystoscopic treatment succeeds. Male, aged 54. This patient had the same steel needles put in, in September, 1925. His tumor was 3 by 4 cm. base. The wound healed in 3 weeks.

In December, 3 months later, the cystoscope showed a small growth back of the right ureter. Three metal seeds containing a total of 10.9 m.c. were inserted, after specimen had been taken—all this through the cystoscope. The specimen was reported papillary carcinoma. On December 28, x-ray picture showed the seeds still present. The tumor was then burned by radiotherm, with the high frequency current; it was burned 3 times between December 20 and February 2.

On March 31, cystoscope showed a linear scar about 2 cm. long, with a central, narrow slough at the site of tumor, and on June 7, the bladder was healed.

Case 3: Fulguration plus cystoscopic radium succeeds. Male, aged 70. This man had

a lesion about 3 by 5 cm. in diameter in the vault, reported by the pathologists as papillary carcinoma. He had been fulgurated in vain for 6 months, having had 9 treatments. I burned him vigorously with radiotherm 3 times to reduce the size of the tumor, and then found the base about 2 cm. (an inch) square. Into this I planted 3 radium seeds of 3 m.c. each. X-ray examination 5 days later showed but 2 seeds present; 1 of them had fallen out. Three weeks after the first implantation I cystoscoped and implanted 2 more. X-ray examination 5 days later showed 4 seeds present, the 2 planted originally and the 2 planted later, and a shrunken, ulcerated stump of tumor. In February, the cystoscope showed only a slough and in May the bladder was healed.

Case 4: Cystoscopic treatment succeeds. Male, age 67. Cystitis for 2 years. Hematuria, 1 week. I cystoscoped this patient on January 9, 1926, and found his bladder so filled with papillary tumor that I could not find its base. The bladder was badly infected. The patient was anemic and neurasthenic. On January 9, I gave him a spinal anesthesia and put in 5 platinum seeds through the cystoscope, being able to guess only that there were probably 2 tumors and that they were probably on the right side of the bladder.

Phosphatic infection ensued: urination every hour; great pain. X-ray picture after 5 days disclosed 3 seeds remaining out of the 5 that had been put in. At the end of 3 weeks, profuse hemorrhage lasting 3 days. One of my assistants wanted to cut him, but he escaped with catheterization. From then on he gradually improved, but at the end of 6 weeks was still passing a little phosphatic grit, under treatment by caprokol and mercurochrome. He was cystoscoped again and found to have a rather soft tumor, with its base extending from "7 to 11 o'clock", i.e., one-third of the way around the bladder neck, the base of another tumor that had been burned off was seen behind the right ureter. Three gold seeds were inserted into the bladder neck and 1 into the tumor behind the right ureter. That was in March, and in April cystoscopy was negative; and again on June 7.

Case 5: The obstinate case. The patient I am now going to report upon is one on whom

I did a glass seed implantation in February, 1924. His age was 49 then. He had had hematuria for 2 years. He had an adenocarcinoma extending widely up one side of his bladder. I put in 18 glass seeds; burned him badly. He took 2 months to heal. The tumor was only partly controlled. I fulgurated for two years and then began to implant metal seeds cystoscopically, but as the tumor was in the vault, which is very movable, and as the needles are very flexible, I could not get the needles properly placed. They would slip along the bladder wall and if I implanted them at all they would not be near the tumor.

Consequently, I had to cut him again on April 27. I repaired a small ventral hernia and found a raspberry growth as big as the last joint of my ring finger in the vault of his bladder. I clamped and tied this and inserted a seed into the base of it. He healed up perfectly and was out in 2 weeks.

Then on May 25, a month later, I cystoscoped and found to my disgust that he had 3 small new tumors that I had not seen at the time of the suprapubic operation, they were so very small. They were quite a little distance from the one that I had burned. I stuck platinum seeds into those and on June 14, those were all gone, but one, and that one I fulgurated well and I am quite confident that the next time his tumor will have disappeared.

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## CATHETERIZATION.

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G. T. SPENCER, A.B., M.D.,  
Elizabeth, N. J.

Volumes have been written on the passage of instruments through the pathologic urethra, but very scant consideration has been accorded to so-called 'ordinary catheterization', as in postoperative retention, et cetera. Perhaps the introduction of a soft rubber catheter through the average male urethra into the bladder seems so trifling a matter as hardly to be worth discussion, yet patients are frequently subjected to acute and unnecessary agony, and physicians to acute and well-deserved embarrassment, during the performance of this supposedly simple manipulation.



Authors carefully emphasize the narrower portions of the male urethra, yet these regions, per se, offer little or no obstruction to any catheter which will enter the meatus urinarius—except, rarely, a lacuna or the valve of Guerin, which is easily avoided by making the catheter hug the urethral floor for the first inch of its insertion. It is the enlarged proximal part of the corpus spongiosum which tests the ability of the operator. If he is unskillful, here at the bulbo-membranous junction is the progress of the catheter most often arrested. Of course, the patient or an assistant may aid by guiding with a finger the catheter upward behind the symphysis, but this is a variable factor, and more often than not the catheter tip is buried in a cul-de-sac of its own making in the loose and movable floor of the urethral bulb.

The secret of successful catheter insertion lies in preventing the lateral yielding of the urethral bulb by stretching the penis in a curve over and above the symphysis, so that the taut walls will direct the catheter directly to the aditus of the membranous portion. This accomplished, the cut-off muscle may be overcome by steady gentle pressure, or relaxed by voluntary effort at urination, and the catheter will glide through the pars membranacea, and pars prostatica into the bladder so smoothly and easily that the patient is not aware that the operation is completed until he hears his urine dripping into the catch basin.

## THE RADIATION TREATMENT OF NONMALIGNANT CONDITIONS.

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(Read before the Orange Mountain Medical Society, May 21, 1926.)

The rapid advances made during the last 15 years in the treatment of diseases with both radium and x-ray irradiation have given this branch of medicine quite a definite place in therapeutics. The enthusiastic "cure-all" stage has been definitely passed. A great deal of experimental and clinical research has been done, on which is established a definite basis or ground work for rational therapy. This

is so well recognized that the leading radiologic societies throughout this country and Europe have exerted marked influence toward the establishment of courses for training in radiology. In England, no one can now begin to practice radiology without having had such a course, or its equivalent in experience.

The field of radiation therapy naturally divides itself into 2 large groups; namely, malignant and nonmalignant diseases. There is so much discussion about the question of malignancy at the present time that I thought a brief presentation of the nonmalignant conditions would perhaps be a welcome relief. It would also give us a clearer idea just what these diseases are, for I am considering only those conditions that have been tried and accepted as being suitable for treatment.

For the sake of clearness, I will group them as follows: (1) Diseases of the skin; (2) Diseases of eye, ear, nose and throat; (3) Toxic goiter, Graves' disease; (4) Enlarged thymus and enlarged bronchial and peribronchial glands in children; (5) Asthma; (6) Lymphadenitis; (7) Leukemia; (8) Hodgkin's disease; (9) Uterine hemorrhage of benign origin.

### DISEASES OF THE SKIN.

Tinea capitis, ring worm, is best treated by x-rays. Cure is effected indirectly by causing the hair to fall out completely, and with it the ring worm (*Trichophyton fungus*) is mechanically removed. The resulting complete baldness lasts for 2 or 3 months, when new hair usually comes in. From this, it might be expected that superfluous hair can be removed by radiation; it can, but permanent removal is more safely done by electrolysis.

Nevi include birth-marks of all varieties. Generally speaking the vascular nevi respond best to irradiation. This includes the flat port wine or strawberry marks and the cavernous angiomas of any size. If the angioma is a fibro-angioma, it is better to remove it surgically and follow that by postoperative radiation. The commonest variety of nevi are the large fleshy forms with or without hair. They are best removed surgically but the flat pigmented variety should be treated by radiation on account of the danger of malignant degeneration. Those most apt to develop into a

malignant melanoma are flat, smooth, deep-black marks without hair.

Warts of all varieties are best treated by radiation. Many times they will disappear under other forms of treatment, but are then apt to recur. The varieties met with are the common wart, or *verruca vulgaris*, occurring most frequently on the hands; the flat warts or *verruca plana* found usually on the face; plantar warts on the soles of the feet; and the senile or seborrheic warts, due to the change of advancing years. These occur anywhere, though most often on the face and back. They are usually flat and frequently multiple.

Leukoplakia is a series of warty white growths on the mucous membranes, particularly in the mouth. These may be smooth white particles or become elevated to warty excrescences and be very difficult to distinguish from carcinoma. Ridding the mouth of irritation, followed by radium treatments will clear up these often border-line lesions.

Keratoses are of particular interest because they have a definite tendency to undergo malignant degeneration. They usually occur in late adult life and are most commonly found on the face and hands. They vary from a slight superficial scaliness to a thick horny covering over a pulpy base. All of these are best treated by irradiation, and of course removing the sources of irritation.

Keloids, soft corns, pruritus, acne, chronic eczema, psoriasis, dermatitis papillaris and the lichens have all proven to be best treated by radiation. Tuberculosis of the skin occasionally responds to radiation. I believe other measures should be tried first; if they fail, then resort to radiation.

#### DISEASES OF THE EYE, EAR, NOSE AND THROAT.

Vernal conjunctivitis, trachoma and cataract have been reported by many observers to be completely relieved by radium treatments. Occasionally I have had very rebellious cases of vernal conjunctivitis respond to radiation after all other measures had failed. I believe it should be reserved only for these difficult cases.

Radiation of the immature cataract is said to be the method of choice by some observers.

As high as 87.5% of the cases are claimed to be very definitely improved. Two and one-half years ago, I treated a large series of these cataract cases at the Newark Eye and Ear Infirmary, and had them carefully checked by the men in the Eye Department. We found improvement in but 2 cases, and I could not conscientiously give the radium the credit for even these. So I do not advocate its use in this condition.

Papillomas and small warts on the margin of the eye-lids completely disappear after radiation treatment, and leave no scar.

With papillomas and granulomas in the external auditory canal that do not respond readily to the ordinary methods of treatment, radiation is of definite value. Tinnitus aurium and "chronic deafness" show but little improvement from it.

In chronic ethmoiditis with recurrent nasal polyps, I have had excellent results with radium. The polyps should be thoroughly removed surgically, and the patient sent within 1 or 2 days for radiation treatment to prevent recurrence. In a number of cases that had been subjected to 10 to 15 operations for polyps, there have been no recurrences following radiation nearly 3 years ago.

A great many men are treating tonsils with both radium and x-rays and claiming excellent results. I also ran a large series of these cases at the Newark Eye and Ear Infirmary. The tonsils in which there was an especially large amount of lymphoid tissue shrunk beautifully, the crypts opened up and they looked fine. About 80% of them, however, developed a fresh tonsilitis when conditions were right. So it is my opinion that radiation should be used only in those cases that cannot or will not have a tonsillectomy performed.

#### EXOPHTHALMIC OR TOXIC GOITER.

Irradiation by either x-rays or radium has but little influence upon simple parenchymatous goiter, the vascular type of enlarged thyroid or the cystic type. It therefore should never be used in these classes of cases. Whenever they need treatment, it is usually surgical.

There is marked benefit, however, from radiation, in the toxic or exophthalmic goiter, and it should always be considered in the management of this disease. In cases that



respond favorably to this treatment, improvement in all of the toxic symptoms may be noted in 3 to 6 weeks and may extend over several months. In some cases, improvement is very much quicker. Tachycardia, tumor and exophthalmos are diminished. The high blood pressure diminishes and after 6 or 12 months may even be normal. The basal metabolism test must be made on every case before treatment and periodically after treatment. It is the only method of definitely checking the progress. A definite drop in the basal rate is always noted and subsequent treatments are regulated by these tests. Rest and other symptomatic treatment should be instituted. About 70% of those treated can be expected to be cured. There is no mortality and no harm done to the patient. At the annual meeting of the Radiological Society of North America, held in Detroit, last December, a symposium on goiter was read. Crile and Lahey presented the surgical side; Hamilton, the diagnosis; and Jenkison and Dunham the radiation treatment. Many important points in the management of these cases were brought out. The most important was that of diagnosis. Perhaps the next was that irradiation cured as many as did surgery, and with a good deal less trouble, i. e., about 70%, and no mortality. All agreed that Crile's mortality of 1% was not duplicated throughout the country by the average surgeon, the latter's mortality being between 5 and 10%. In concluding, Crile stated that the real problem now was to properly select cases for operation and those for radiation treatment, and that in the near future this would be possible, but only after careful follow-up study by both surgeons and radiologists.

#### ENLARGED THYMUS.

In early infancy, sudden death may occur from an enlarged thymus. Clinically, the outstanding symptoms, or syndrome, usually follow a slight accident, minor operation or an acute disease. Without previous warning, there are attacks of convulsions, or paroxysms of dyspnea, cyanosis or even asphyxia. The convulsions recur at short intervals and the temperature remains high. Death may follow in 12 to 36 hours. In the less severe types, recovery is the rule, but they retain the habitual

attacks of coughing, choking, dyspnea and cyanosis.

The diagnosis of enlarged thymus is often very difficult. It may occur at any time up to 3 or 4 years of age, and also occurs occasionally in adults. Roentgenologically, the enlarged mediastinal shadow must be differentiated from a new growth, syphilis, collection of fluid, enlargement of the great vessels and from enlarged glands. There are at times clinical signs of obstruction which show no evidence of enlarged thymus on the x-ray film, so it is of the utmost importance to secure the complete clinical data in each case. The thymus is very sensitive to radiation and the results of treatments are often striking. The coughing and spasms disappear after 1 or 2 treatments.

Enlarged peribronchial lymph nodes often appear in the hilus of the lung, on chest films, following influenza, bronchitis and particularly pertussis in children. Clinically, one notes a persistent cough that does not clear up. Radiation treatment in these cases also produces remarkable results. Doctor Von Hofe and I have treated a series of these cases and in every one, the cough has disappeared. Subsequent films will be made to check up the results and a further report submitted.

Bronchial asthma was first treated by x-rays in 1906, by Schilling. He was making a fluoroscopic examination of the chest of a patient who had severe paroxysms for over 20 years. A few days later, when the patient returned for further examination, he volunteered the information that after his first examination he had not coughed in 24 hours, which was the first time there had been such an interval in 3 years. This observation was followed up by actual treatment of other cases, and a good deal of comfort has been secured for these patients. The beneficial effects of these rays are due to action upon the ciliated epithelium in the walls of the bronchi, and the goblet cells which secrete the mucus. The enlarged peribronchial and tracheo-bronchial lymph glands also disappear, thus removing sources of irritation of the fibers of the vagus system. There is a large group of patients who are not benefited or relieved by the protein sensitization methods, vaccine treatments

following the removal of infected foci, such as the tonsils, nasal polyps, spurs or hypertrophied turbinates in the upper respiratory tract. These are the cases which should be treated by x-rays.

#### TUBERCULOUS GLANDS.

Tuberculous glands usually clear up under this form of treatment. If they are abscessed, the pus should, of course, be evacuated before radiation is begun. If they are hard, x-ray films should be made first to ascertain if they are fibrosed or have undergone calcification. Should such be the case, of course treatment is not necessary.

#### LEUKEMIA.

In both the lymphatic and splenomyelogenous leukemia, irradiation can safely be used as a palliative measure. The enormous spleen and enlarged glands usually entirely disappear and definite improvement in the blood picture takes place. In the lymphatic type, the red corpuscles and hemoglobin are definitely increased, while the white corpuscles are reduced to normal. These remissions are brought about with least discomfort to the patient, and from the economic standpoint are of great importance to the wage earner, as the majority do not have to be hospitalized.

#### HODGKIN'S DISEASE.

In Hodgkin's Disease, definite remissions are usually obtained though cure is not expected. I know of 2 cases that have been carried along now for 8 years by x-ray radiation; the average is from 4 to 6 years. The patients are comfortable and able to work. Such palliative treatment with so little inconvenience to the patient must be considered in these cases, particularly as there is no other form of therapy that gives as good results.

#### UTERINE HEMORRHAGE OF BENIGN ORIGIN.

Perhaps in no other field of radiation therapy do we get such brilliant results as in the treatment of benign uterine hemorrhage. In 98% of the cases, hemorrhage is stopped. If a fibroid is present it disappears in 80% of the cases. There is no mortality, as compared to 1 to 2% for hysterectomy. There is no prolonged period of convalescence following 3 or 4 weeks of hospitalization. At most, these patients are in the hospital but 5 days and

are able to get around very soon after they are home.

The effects of irradiation on a benign hemorrhagic uterus have been quite well established and are as follows:

(1) There is an exfoliation of the hypertrophied and congested mucous membranes which is afterwards replaced by healthy cells.

(2) Perivascular fibrosis and a proliferation of the endothelial cells of the enlarged uterine blood-vessels are set up, which progress to a condition of endarteritis obliterans.

(3) Ripe graafian follicles are destroyed, which destruction produces a cessation of uterine bleeding. Small doses apparently regulate abnormal periods, while large doses cause complete cessation of the menstrual cycle and produce artificial menopause.

For the sake of clearness, we will consider first those causes of metrorrhagia and menorrhagia not associated with fibroids, and secondly fibromyomas.

In the first group are included the functional menorrhagias of adolescent girls and young women, (2) the aggravated and intractable dysmenorrhea cases, and (3) chronic metritis. In all of these cases all other coincident or contributing pathology must be excluded, such as appendicitis, cystic ovaries, etc. In the functional menorrhagias of adolescent girls and young women up to 20 years of age, the menstruation amounts to almost a persistent metrorrhagia. Small doses will regulate the flow and not disturb the menstrual period. Aggravated and intractable dysmenorrhea is usually found in the neurotic type of women who are reluctantly yielding to old age. Their general health is impaired, they have but 10 comfortable days in each month and they have to struggle constantly to keep up during the pre and postmenstrual storm. Radiation is the method of choice for these cases.

In the chronic metritis group falls the greatest number of cases, including polypoid conditions, hypertrophic or hyperplastic endometritis or the result of myopathic or vascular changes. These patients run in age from 36 to 56 years and are in the climacteric period. Bleeding is often persistent in spite of repeated curetting, and the only recourse is a hysterectomy. Radiation is by far superior; it



gives quick relief and does not incapacitate the patient.

#### UTERINE FIBROIDS.

Many men do not operate on a case of uterine fibroid, if it is suitable for radiation, because such a large percentage of them are cured and bleeding, if present, is stopped. In properly selected cases, success is assured. A thorough study of each case is therefore necessary to determine the best method of treatment, and the following contraindications must be excluded.

(1) In young women from 20 to 35 years old, with fibroids where preservation of the sexual life and maternal possibilities are paramount, myomectomy or subtotal hysterectomy with preservation of the ovaries should be done. If recurrence follows myomectomy, radiation may safely be done.

(2) Tumors larger than a 4 months' pregnancy with marked pressure symptoms are usually best treated surgically, though I have had 3 poor surgical risks with fibroids up to the umbilicus that had to be rayed. In all of them, the tumor shrunk down to just the level of the symphysis, and all symptoms disappeared.

(3) Fibroids undergoing degeneration or calcification, as well as the cervical submucous or pedunculated ones should be operated. X-ray films will indicate any calcification present.

(4) The presence of acute or quiescent inflammatory conditions in the pelvis or abdomen, such as tubes or appendix, as well as enlarged cystic ovaries, are distinct contraindications. These conditions should have proper surgical attention.

I insist that every case of benign uterine hemorrhage should, as a routine, be curetted prior to treatment in order to rule out possible malignancy. During the past 2 years I have found unexpected malignancy in the fundus, by this procedure, in 2 cases, and proper treatment was instituted. During the last 3 years I have had 38 cases of menorrhagia without fibroids and 59 cases of uterine fibroids that have been treated with radium. There were 3 failures in the menorrhagias. In 1 case, at subsequent operation, a large ovary was removed with the uterus. The second case I called a failure was a neurotic individual who was operated on in New York shortly after

her treatment. Her bleeding had ceased and she was doing nicely. Nevertheless a hysterectomy was done. The third did not complete her treatments. There was 1 failure in the fibroid group. At operation, small multiple fibroids were found scattered throughout the body of the uterus and 3 were pedunculated.

My experience has been practically all with radium, but during the past year we have treated a number of cases with x-rays. They seem to be just as promising in their outcome as those treated by radium.

There are many lesions that might be included in this brief resumé, but the above mentioned ones are those most commonly treated.

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#### ACUTE TRAUMATIC ABDOMEN.

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(Read at a meeting of the Newark Beth Israel Hospital Society.)

In view of the increasing number of vehicular accidents associated with abdominal injury, I have selected several cases from our service to bring out some salient points in the so-called acute traumatic abdomen. Any surgeon whose experience of hospital work brings him in contact with such cases realizes the great difficulty that almost always exists in discriminating in the early stages between those cases of abdominal injury which are trivial and those in which a grave lesion of some viscus exists.

The most common cause for these accidents is the vehicle, especially the automobile. Next in order of frequency are falls, blows and penetrating wounds. The organs or viscera involved in order of frequency are intestine, chiefly small bowel, stomach, kidney, liver, spleen, bladder and pancreas.

The importance of an early diagnosis of rupture of the intestine cannot be exaggerated and delay of an hour in any case may mean that the patient's chances for recovery are lessened. Permit me to quote the following typical case. A man about 60 was admitted with a history of a fall on the street. There was moderate shock, with pain in the lower ab-

domen. The pain became progressively worse and he began to vomit blood. Upon admission to the hospital he showed the typical picture of general peritonitis. Operation revealed a ruptured ileum with a diffuse peritonitis. The patient succumbed in 24 hours. In lacerations due to a blow, the common site involved is the ileum. The patient when first seen is usually in shock. This is nothing characteristic, since a severe blow in the abdomen without intraperitoneal injury will give the same picture. The pulse at first is small and thready. Later it increases in frequency and volume. There is an increase in respiration. As the shock passes away, vomiting occurs, which becomes persistent. Owing to the injury done to the anterior abdominal wall, the skin may be sensitive to pressure and the muscles may be rigid. In cases of rupture of the intestine, the rigidity is board-like, as in a perforated ulcer. Rupture of a kidney, bladder or liver gives localized tenderness and rigidity, but in rupture of the bowel the unalterable rigidity is universal. Later the symptoms of a general peritonitis supervene. To sum up this important phase, one may say that when a patient has sustained an injury that is likely to produce a serious lesion, if the abdomen soon becomes tender and rigid, if the rigidity gradually increases, with rise in pulse, vomiting, and dullness in the flanks, then an exploratory operation is not only justifiable but imperative. The reckless opening of an abdomen in all cases of abdominal injury is not to be condoned. During the early stage of shock, when the human economy is at its lowest ebb, a laparotomy adds insult to injury. On the other hand, it is a less serious offence than the neglect to open an abdomen when there are presumptive signs of intestinal rupture.

Trauma of the stomach is usually due to penetrating wounds. The stomach may be wounded alone or one or more other organs may be involved at the same time. Any part of the stomach may be involved but usually it is found to be the anterior wall or a complete penetrating wound of both anterior and posterior walls. Bullet wounds sometimes cause tangential wounds of the anterior wall. Wounds of the stomach are often accompanied by severe hemorrhage, which may be both into

the organ and peritoneal cavity. Shock may be mild, moderate or severe, depending upon the amount of blood lost. There may be an escape of gas through the abdominal wound. Vomiting of bloody gastric contents is a very constant feature. Later, the symptoms and signs of peritonitis appear. I will give you a brief summary of a typical case admitted on our service. The patient was an adult male about 45 who was admitted with a history of gunshot wound in the abdomen. The point of entrance was just below the costal margin and slightly to left of the midline. The patient felt quite comfortable but later began to experience pain in the upper abdomen and vomited blood several times. His pulse gradually increased. Operation performed about 8 hours after injury revealed a tangential wound of the anterior wall of the stomach with a laceration of the left lobe of the liver. Further course of the bullet could not be determined. The anterior wall was sutured and the abdomen drained. Three days later the patient succumbed from a general peritonitis. Necropsy revealed a laceration of the posterior stomach wall, lacerated diaphragm, lacerated left lung, lower lobe, with the bullet lying free in the pleural cavity. The point to be emphasized, as brought out by the autopsy findings in our own case, is a careful inspection of the posterior wall either by incising the gastrocolic or gastrohepatic omentum. More than 1 case has come to autopsy with a leaking hole on the posterior wall.

Kidney damage may take the form of contusion, laceration or rupture. Contusion of the kidneys is probably a very common injury in any abdominal trauma, since we not infrequently find microscopic blood in the urine where no other lesion exists. Traumatic rupture and laceration is not rare, though its consideration in our text books would indicate that it is very uncommon. One is amazed, after a careful review of the literature, at the frequency of kidney ruptures that follow apparently inadequate force, the degree of damage being out of proportion to the amount of injury. For instance, who would suspect that a man would rupture his wife's kidney while dancing with her, or a boxer rupture his kidney while delivering a blow to his opponent?



In our case, of which I will give you a brief summary, the injury was trivial. This was a boy, 6 years of age, who was pushed against the corner of a school desk, striking his right loin. He was dazed for a moment, felt a sharp pain in the right loin and vomited several times. For 2 days following the injury he passed gross blood in the urine. He felt sick, complained of pain in the right loin and again vomited on several occasions. He ran a low grade fever. Physical examination showed a doughy mass in the right loin. At operation there was a large perirenal hematoma with extensive laceration of the kidney cortex and pelvis, the ureter being torn from the pelvis. Nephrectomy was performed and the child made an uneventful recovery. The symptoms usually show a regulation train of events: a fall, felt sick, vomited, hematuria, dysuria, pain in the loin and upper abdominal quadrant, and shock. Sometimes, if the ureter and pelvis are torn off, the bleeding is into the peritoneal cavity and no blood is found in the urine. Frequently much perirenal bleeding occurs and a mass can be felt, and sometimes seen, in the loin. Shock that comes on after several hours is due to hemorrhage, whereas if it occurs immediately it is not due to kidney injury but to injury to the solar plexus. Reflex anuria of the uninjured kidney is not unusual and has even caused death.

The treatment of ruptured kidney has not yet been standardized and unfortunately some surgeons handle these organs as ovaries were handled a generation ago. The common procedures are expectant treatment, conservative treatment and nephrectomy. Cases are treated expectantly for injuries where constitutional symptoms are absent and hematuria alone directs attention to the probability of a kidney lesion. A renal injury of moderate degree tends to recover spontaneously but expectant treatment with rest in bed and an ice cap over the loin for at least 48 hours should be insisted upon until the dangers from possible complications are over. A case recently treated on our service illustrates this point very well. This was a young girl, about 8 years of age, who had been struck by an automobile. She was conscious on admission but appeared in extreme shock, with a picture of exsanguin-

ation. There was a fracture of the right clavicle and several ribs in the right posterior axillary line. There was board-like rigidity in the right upper abdomen with marked tenderness extending into the loin. A catheterized specimen of urine showed considerable blood. After careful observation it was concluded that the child had a traumatic lesion of the right kidney but in view of the chest injury and the poor general condition of the child, operation was held in abeyance. The following day she showed considerable improvement and continued to do so, the urine clearing up in several days. She was discharged in about 3 weeks. I saw her recently in our return clinic and she is feeling very well. It is generally agreed that if the renal substance alone is only moderately injured, the pedicle being intact, conservative surgery is indicated. It is criminal to routinely do nephrectomy. The recognized indications for nephrectomy are: (1) Tearing of renal pedicle. (2) Crushing of kidney substance. (3) Inability to raise pelvis for suturing. (4) Extensive tears of pelvis and ureter. (5) Diseased conditions of the injured kidney.

Laceration and rupture of the liver are often seen in vehicular accidents where the wheels pass over the upper abdomen from right to left. Associated with this may be injuries to the gall-bladder and extrahepatic ducts. Wounds of the liver are of 3 kinds: (1) Rupture of hepatic tissue combined with tears in the capsule. (2) Separation of capsule with subcapsular hemorrhage. (3) Central rupture, which often gives rise to separate or united hematomas. Wounds of the liver may be single or multiple. The right lobe is injured 6 times as frequently as the left. The 2 serious features in all wounds of the liver are hemorrhage and infection, and the former is the more grave. Hemorrhage, if it proves fatal, does so within 24 hours. The need for operation, therefore, in suspected cases of wound in the liver is instant. The signs and symptoms of liver rupture are shock, hemorrhage, pain, distension and rigidity of the upper abdomen with shifting dullness in the flanks.

Rupture of the spleen may be caused by direct or indirect violence. The direct violence is usually due to a vehicle passing over

the upper abdomen from left to right or blows in the left upper quadrant. Indirect violence is sustained when the body is twisted in falling or in the endeavor to recover from a fall. Here also, as in kidney ruptures, a trivial blow may produce a rupture. Jackson, in *Surgery Gynecology and Obstetrics*, September, 1925, reports such a case, of which I will give a summary. The patient was a 15 year old girl who while sitting in a movie theatre had a sudden pain in the left abdomen. She vomited before she was able to get into the aisle, and was assisted to the street, where she fell and vomited again. About 2 hours later she was in shock and appeared in extremis. She was in extreme pain, the pain radiating to the left shoulder. The abdomen was rigid, with marked tenderness in the left upper quadrant. There was a moderate anemia. She was treated for her shock, which subsided in 8 hours, and laparotomy was performed. The peritoneal cavity was filled with clot and a ruptured spleen was found. Splenectomy was performed and she made a good recovery. On questioning her more closely after the operation, it was found that 4 weeks prior to this illness, while playing in school, she was thrown against a desk, striking her left side. She had severe pain in the left subcostal region but after lying down for a short time was able to go home. Moderate pain in the left subcostal angle persisted up until this attack. From the pathologic examination of the removed spleen, there was no question but that at the time of the original injury she suffered a rupture of the spleen; first, the rupture may have consisted of a short split in the capsule which filled with blood clot and thus the wound was tamponed until for some unknown reason a second hemorrhage occurred; secondly, the rupture was subcapsular and it took a month of slow bleeding before the capsule was ruptured at the site of the original contusion.

The signs and symptoms of ruptured spleen are those which follow the serious forms of injury to the abdomen. Collapse, blanching of the face, sweating of the brow and forehead, a thin rapid pulse, abdominal distension and tenderness, are frequent findings. Not infrequently there is a referred pain to the

left shoulder. The treatment is either suture or splenectomy, depending upon the degree of laceration.

In conclusion of this brief summary of trauma of the abdomen, it should be understood that the attitude of the surgeon toward the patient who has sustained a severe abdominal crush or blow should be as Moynihan says "look and see" rather than "wait and see" unless there is convincing evidence that the lesion is a slight one. When there is shock, everything should be done to improve the state of the patient, such as blood transfusions, etc. During the few hours spent in this period of "watchful waiting" sufficient evidence for or against laparotomy may become manifest. Operation may reveal nothing amiss in the abdomen; this is a small matter, however, when compared with the calamity attendant upon delay in any case where operation is really required.

#### DISCUSSION.

Dr. Danzís: I wish to thank Dr. Soschin for preparing this excellent resumé. I do not know of any case that is more puzzling to the surgeon and that needs more watching and exercise of judgment than cases of traumatic abdominal injury. With the experience we have had in the hospital with these cases, we have found it best for the surgeon to stand by, observe and weigh the symptoms very carefully, before hurrying into an operation which very often ends disastrously and gives surgery a black eye. I can recall a case which will bring this point out very strikingly. A man was brought into the hospital in profound shock, with a history of a pelvic injury by a vehicle. X-rays showed a separation of the symphysis with fracture of the ascending ramus of the pubes. The bladder was empty and no urine could be obtained on subsequent catheterizations. There was no extravasation of urine. We waited 36 hours and the patient reacted somewhat but still gave the impression of internal bleeding, so we decided to do a laparotomy. As soon as the incision was made the man expired. He had no internal bleeding. Here was a case where if we had waited the man might have lived. Only recently I was called in consultation to a woman with a supposed intra-abdominal lesion due to jumping from a third story window. She had a terrific pallor and the pulse was barely perceptible. After careful examination I came to the conclusion that she had no abdominal injury. Autopsy revealed a fracture of the sixth dorsal vertebra. When a patient comes in with symptoms of shock and a blood pressure below 80 beware of hurried surgical intervention. These are the cases that usually prove disastrous.

Dr. Rothenberg: Injuries to the genito-urinary tract are of particular interest to me. It has been found that the kidney is more frequently injured than the liver or spleen. Statistics show that the right kidney is more frequently injured than the left. The reason for this is the



situation of the liver above it. Tumor in the loin is not an infrequent symptom of kidney injury. Hematuria occurs in about 95% of the cases of injured kidney or bladder. Injecting the bladder with fluid and comparing it with the amount removed will prove whether or not there is a bladder injury.

Dr. M. Brotman: I wish to speak of a case where a boy was struck by a football. He complained of pain in the left abdomen, was in shock and had hematuria. Exploration of the left kidney revealed nothing. The abdomen was opened and a ruptured spleen found. Splenectomy was performed but the patient died.

Dr. Silver: Is it true that absence of liver dullness is always a sign of a ruptured hollow viscus?

Dr. Soschin: I am glad that this paper has aroused your interest. The point brought out by Dr. Rothenberg, of injecting fluid into the bladder in suspected rupture is an important one and should always be borne in mind. The case cited by Dr. Brotman brings out a very interesting point. In ruptured spleen we not infrequently see an associated hematuria without any demonstrable lesion in the kidneys. In answer to Dr. Silver, the absence of liver dullness in the acute traumatic abdomen usually means the rupture of a hollow viscus, but I venture to say that about 25% of our perforated peptic ulcers do not show this sign.

## TREATMENT OF HEAD INJURIES.

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(Read at a meeting of the Beth Israel Hospital Society.)

During the past 3 years there have been admitted on our service at the hospital 18 people with head injuries of sufficient extent to warrant careful observation for a period ranging from a few hours to several weeks. In several of these cases the exact amount of damage could not be ascertained at once, and the management, therefore, could not be determined upon at once. In this paper we shall present a brief summary of the positive findings, progress of the case, and our method of treatment, with the hope that it may stimulate a discussion and perhaps lead to formulating some definite rules as to the management of acute head injuries.

We all know that in head injuries the all important thing is not the injury to the bones, but rather the extent of damage sustained by the intracranial contents, but for our purposes it is better to classify the cases as follows:

- (1) Those without fracture of the skull.
- (2) Those with fracture of the skull.
- (3) Those treated expectantly.
- (4) Those operated upon.

Most of the patients were admitted through the clinic and, therefore, whenever possible, radiograph was taken before the patient was transferred to the ward. Of the 18 cases in this series, 14 showed positive x-ray findings, while 4 were negative. Of the 14 with positive fractures, 9 were unconscious on arrival, 3 were stuporous, and 2 were conscious.

In the first group, those without fracture of the skull, there were 4 cases:

Case 1.—Male child, age 4 yr. Had been struck by an automobile, and fell on his head. He was brought to the hospital in a stuporous condition, bleeding from his nose, and presenting an hematoma over left occipital region. His temperature was subnormal, but pulse and respiration were normal. Reflexes normal. During the next 3 hours, child had projectile vomiting several times. After 3 hours, he was conscious and well oriented, and improved rapidly. After 48 hours observation, child was discharged. No spinal puncture had been made and the chart shows no record of a blood-pressure reading.

Case 2.—Female child, aged 2. Fell from a four-foot stoop and brought to hospital in a stuporous condition, bleeding from left ear. Except for a swelling over the occipital region, and a positive Babinski on the right side, examination was negative. Pulse, respiration, temperature and blood pressure normal. Next day child was conscious and acted normally. All reflexes normal, so that she was discharged after 48 hours. No eye-ground examination. No lumbar puncture.

Case 3.—Adult male, age 44. While driving his car, he collided with another automobile. When brought into hospital, he was semiconscious, and completely aphasic. Showed a laceration on right side of face and multiple contusions of head. Soon after admission, patient had convulsive movements of entire right side of body. Pulse 90; temperature 101; respirations 40; blood pressure 170/40. A depressed fracture was thought of, but x-ray picture taken and developed immediately, was negative. Spinal tap was negative. One

hour later, he had another convulsive seizure, at which time he became markedly cyanosed and frothed at the mouth, greatly resembling an epileptic. Three hours later, he regained his speech, and gave a history of an old chronic epilepsy. Then was transferred to medical service.

Case 4.—Adult male, age 45. Was knocked down by an automobile and brought into hospital in a stuporous condition. Examination revealed multiple contusions of head, and an internal strabismus of left eye. He regained full consciousness in about 1 hour and then it was learned that the internal strabismus had been present since childhood. His condition thereafter improved steadily; no signs of pressure appearing at any time. No spinal tap was performed. His stay in the hospital was 10 days.

In reviewing these 4 cases, we can rule out one, the epileptic, as not being one of head injury. The other 3, however, showed some symptoms of brain injury, and since lumbar puncture was not done, we do not know whether or not there had been any intracranial hemorrhage, and it is questionable whether the patients had been kept under observation long enough. The charts show that the patients were symptom-free on discharge, but since we have had no follow-up their present condition is not known.

The second group consists of 8 cases that showed a fracture of the skull by x-ray examination, and were treated expectantly. All 8 cases recovered.

Case 1.—Male adult, age 35. Fell off a moving truck. Was brought to hospital unconscious. Soon after admission, he had convulsive movements of left side of body. Examination did not disclose any external evidence of severe head injury—no hematoma, no swelling, but a definite depression was felt over right temporoparietal region; this was shown by x-ray. Before operation could be decided upon, the patient regained consciousness and said that he had sustained the fracture during the war. He refused operation though he had had epileptic seizures for several years.

Case 2.—Male child, age 8 years. Had been struck by an automobile, and brought to hos-

pital in a semiconscious state, bleeding from left ear. Further examination showed a lateral nystagmus and a positive right Babinski. Spinal fluid was bloody and under slightly increased pressure. X-rays showed a linear fracture on left side from lambdoid suture to mastoid process. Blood pressure, pulse and respiration were normal and remained so during his 14-day stay in the hospital. No new focal signs appeared, and the old signs, nystagmus and Babinski, disappeared, so that the child was apparently well on discharge.

Case 3.—Male child, age 9. Struck by an automobile and brought into hospital unconscious. He had marked contusion and swelling in occipital region. X-rays showed a long linear fracture of the occipital and parietal bones. His pulse and respiration were slow. Blood pressure was high and he continued to be in deep coma. Spinal fluid was bloody and under marked pressure. Operation was contemplated, but the general condition of the child was so poor it was thought best to wait. Spinal taps were repeatedly done and the child gradually came out of its stupor. On the fourth day he was fully conscious and his condition improved rapidly, so that he was quite well when discharged at the end of 3 weeks.

Case 4.—Male adult, age 65. Struck by an automobile and brought to hospital unconscious. Examination showed marked ecchymosis of right eye, bleeding from nose, multiple contusions and dislocated right shoulder. Pulse, temperature, respirations and blood pressure were normal. Patient regained consciousness in about 1 hour, but could not speak English, so no definite history could be obtained. His general condition improved rapidly; at no time did he show signs of increased intracranial pressure. No lumbar puncture was done. After patient reacted from initial shock, an attempt was made to reduce his dislocated shoulder. All attempts failed even after an anesthetic had been given. The next day it was learned, through an interpreter, that the dislocation was of several years duration, thus explaining our failure. This patient signed his release after 16 days.

Case 5.—Male child, age 4. Struck by an automobile and brought to hospital in semi-



conscious state bleeding from left ear and nose. While in the clinic he had convulsive seizures in both upper extremities, and right lower extremity was spastic. He had a high pitched cry and a rolling of eyes to left. Pulse on admission was 55, but soon rose to 110. Blood pressure was normal. Spinal tap showed fluid with normal pressure. His pulse, respirations and blood pressure remained normal thereafter, but a slight tremor of right hand persisted for a few days. Parents signed release after 14 days.

Case 6.—Male adult, age 41. Was thrown from a speeding automobile. Unconscious and almost pulseless when brought to hospital. Bleeding from left ear. Pulse was 72. Respiration 16, deep stertorous; blood pressure was 82/48. Patient had projectile vomiting, then showed stellate fracture of temporal bone. No depression. Blood pressure soon rose to 100. Pulse varied between 72 and 80. Was of better quality. Next morning patient could be aroused but appeared confused. Was restless and at times irrational. Blood pressure remained normal, but pulse became somewhat slower, once reaching 50. Eye-grounds were normal. Because patient's mental condition appeared to be improving, and he was conscious most of the time, operative intervention was deferred. No spinal tap was done. After 3 days he was perfectly conscious and oriented, and though he had headache, he improved steadily until discharged in 3 weeks.

Case 7.—Adult male, age 33. Thrown from a speeding automobile. Was conscious on admission. Bleeding from left ear, nose and mouth, and from a laceration over left temporal region. X-ray showed a fissure fracture of left temporal bone. Soon after admission patient had projectile vomiting, followed by convulsions of right side of body. Blood pressure 132/90; pulse 76; respirations 16. During the night was unconscious. Pulse rose to 88, but blood pressure dropped to 86/60. Spinal tap showed bloody fluid but normal pressure. Therefore operation was delayed. For the next 4 days, patient was stuporous and irrational. Blood pressure ranged from 104/80 to 130/55. Pulse averaged about 78, but once went as low as 54. After the fourteenth day, he gradually re-

covered, but even upon discharge, after 21 days, showed some disturbed mental balance.

Case 8.—Adult male, age 27. Fell from a scaffold and brought to hospital unconscious. Bleeding from ear, nose and mouth. A fracture could be felt extending from right orbit upward and backward over frontal bone. Soon after admission patient regained consciousness and his mentality remained clear thereafter. He vomited several times, but it was not projectile in nature. Pulse 66; temperature 96.2°; respirations 30; blood pressure 100/50. Temperature soon rose to normal. Eye-grounds were negative and he had no neurologic signs. He had severe headaches throughout his stay in hospital, but otherwise there were no signs of pressure. After 31 days he was discharged, much improved, but still had headache.

In this group of 8 cases, there were 3 that showed at the beginning, some localizing signs which would indicate some increase in intracranial pressure. In 1 case, operation would have been performed had the child's general condition been better, but in the other cases operation was deferred because it was felt that the increase of pressure was not marked, and that nature was taking care of it. This was merely an impression gathered from clinical observations, however, and not checked by lumbar puncture or ophthalmoscopic examination. We know definitely, because it occurred in 1 of our later cases, that a patient may appear to be markedly improved clinically and symptomatically, and still have a marked increase in intracranial pressure, as shown by lumbar puncture and eye-ground examination. Though all of these patients were quite well on discharge, one of them now suffers from epilepsy, and another is mentally unbalanced. What the condition of the other patients is, we cannot tell, because our newly founded follow-up department has not reached them as yet. We wonder whether it would not be advisable to decompress if signs of pressure persist for more than a few hours. Elsberg believes that temporary twitching, convulsions, and other signs of pressure may occur with mild brain injuries and that these may clear up entirely with absolute rest alone, but if they persist or grow worse, relief from pressure must be given.

In the next group we have put all those cases that showed a fracture of skull and were treated by operation. Our operative mortality was 50%, which is about the average in other clinics. Our average mortality in all cases of fractured skull was 21%, which is much lower than other men report. Besley reports a mortality of 53% in 1000 consecutive cases, Harris 51% in 330 cases, Wilensky 31% in 75 cases. Of the 6 cases operated upon, we now feel that operation was indicated in only 3 cases, those recovered, while in the other 3 cases operation might better have been deferred. In these latter cases, the result probably would have been no different if the expectant treatment had been instituted, for we feel that when a patient shows much shock, operation takes away whatever chance of recovery he has.

'Case 1.—An adult male, age 25. He was crushed between an automobile and a freight car. He was bleeding from the nose and from a wound on the scalp. X-rays showed multiple depressed fractures of right parietal bone. Pulse on admission was 78 and blood pressure 135/72. Within several hours his pulse dropped to 68 and blood pressure rose to 178/88. Patient was then operated upon. The depressed spicules of bone were removed and contused tissues excised. He stood the operation well, and next day his blood pressure and pulse were normal and remained so until his discharge 17 days later.

Case 2.—Male child, age 6. In an automobile accident. Brought in semiconscious. Had a lacerated scalp and a depression was felt on left side. Bleeding from nose and mouth. Blood pressure was 90/70, pulse 63. He vomited several times, but appeared to react quite well during the next few hours. He continued to bleed quite a bit from the region of the skull fracture, so it was decided to operate. At operation, brain tissue appeared in the wound and the lateral sinus was found to be ruptured. The sinus was packed and a débridement done. For the next two days patient was in serious condition, irrational and restless, but pulse and blood pressure were normal. After that he convalesced normally and was discharged in 20 days.

Case 3.—A male infant, 1 year old. Fell

from mother's arms. Brought into hospital unconscious. Had large hematoma of frontal and occipital region; internal strabismus of right eye, spastic right arm. Pressure on the hematoma caused convulsions. X-rays showed a stellate depressed fracture of right occipital bone. Operation was performed immediately and depressed bone elevated. The child never rallied and died in 3 hours.

Case 4.—Adult male, age 50. Struck by a taxi. Brought into hospital unconscious, bleeding from ears and scalp wounds. He had a compound depressed fracture of the left mastoid. He was operated upon immediately and depression was elevated. The patient never regained consciousness and died in 48 hours.

Case 5.—Female child, age 4 years. Fell from a third story window. Unconscious on arrival, bleeding from right ear, through which brain tissue was seen. Child had a compound comminuted depressed fracture of the right temporal and parietal bones. Temperature was subnormal and pulse rapid. Child was operated upon immediately but died within 1 hour.

Case 6.—This last case is reported in greater detail because the patient was carefully watched for 2 weeks before operation was performed. An adult male, age 32, was struck by an automobile and brought to hospital in a semiconscious condition. Had been unconscious for a short period after the accident. He showed marked contusion and ecchymosis of right side of the face and head. Was not well oriented and did not answer questions well. Had projectile vomiting, and such profuse nasal bleeding as to require packing. Pulse was 68; respiration 20; temperature 99; blood pressure 110/60. During the first 24 hours, blood pressure ranged between 110-130. Pulse became slow, being in neighborhood of 60. During the next day, his condition was unchanged. On the second day, lumbar puncture was attempted, but patient resisted too much. On third day patient appeared to be brighter mentally but he then showed diminished abdominal and patellar reflexes on the left side, and eye-ground examination showed a papillo-edema of 2 diopters on right and 4 on the left side. Spinal puncture was done



under gas anesthesia and a bloody fluid under slight pressure obtained. The next day patient was better, but that night he became irrational and violent, so that he had to be placed in a strait jacket. This condition continued for 2 days, when the patient began to show marked improvement. He was well oriented and rational. His eye-grounds showed improvement and it was thought that nature was taking care of the increase in intracranial pressure. The blood pressure had remained normal, as had the rate and character of respirations, but the pulse was about 60. One week later, patient still continued to feel very well, but his eye-ground showed evidence of pressure. There was a papillo-edema of 6 diopters on the right side and 8 on the left. The patient's sight, however, appeared normal. Dr. Rados felt that unless the condition subsided soon, blindness would supervene. Two days later the edema seemed to be increasing so that operation was advised, though the patient felt well otherwise.

A subtemporal decompression was performed under local anesthesia. The subcutaneous tissues were ecchymotic but there was no evidence of epidural hemorrhage. The dura was tense but the spinal fluid was clear. The patient reacted well and convalesced normally. The eye-grounds gradually showed a reduction of the edema and in 2 weeks the patient was out of bed. Three weeks after operation, he was discharged feeling well, but showing the following abnormalities: Slight dizziness and headache; choked disc of 3 diopters; diminished left knee jerk and positive Romberg.

In concluding, we wish to express the view that injuries to the skull and its contents are best treated conservatively until there are definite signs of increased intracranial pressure. During the initial period of shock, the less the patient is disturbed the better are his chances for recovery. At this time the patient should be flat in bed, though some believe the Trendelenburg position is better during the shock.

All patients who have a history of head injury with unconsciousness, should have a diagnostic lumbar puncture with manometric readings before discharge. Lumbar puncture

should be deferred until the initial period of shock is past. If the tap shows a bloody fluid, it is indicative of injury to brain or blood vessels, and the patient should be treated as one with a potential increased intracranial pressure; he should be kept in bed for about 3 weeks, even if he feels well and shows no signs; during this period, frequent retinal examinations should be made. Blood pressure readings should be made every half hour for 3 hours, and then hourly for 3 to 6 hours. A rising systolic pressure or an increasing pulse pressure is indicative of increasing intracranial pressure. The pulse rate, respiratory rate and character should be noted at the same time. In the initial stages of increased pressure, the pulse becomes slower, but in the terminal stages, it is rapid and weak. Temperature is subnormal in shock, slightly elevated soon afterward and very high in terminal states. The mental state of patient should be carefully noted. The length of the period of unconsciousness and the time of return to consciousness should be charted. In mild cases there may be alternating periods of lucidity and stupor, while in steadily increasing intracranial pressure, the stupor passes to coma, which becomes deeper and deeper. A fairly complete neurologic examination should be made. The main reflexes should be taken, and the cranial nerves tested if the patient is conscious. Radiograph should be taken as soon as possible, but there is no absolute emergency about this. Even in depressed fractures, some men advise waiting until the scalp wound heals, so as not to work in a contaminated field. If the symptoms of pressure appear, however, the depressed bone must be elevated at once.

#### DISCUSSION.

Dr. Danzis: All cases of head injury even of an apparently minor nature such as contusion, incised or lacerated wounds, should be considered as potential brain injuries either with or without fracture. I always laid stress on the following points to the house staff, that whenever such cases present themselves for treatment every effort should be made to induce these patients to remain in the hospital for sufficient length of time to permit of a careful observation of the character and extent of the injury. If the patient refuses to comply with this request, then a written release should be obtained from him or his relatives. We can mention striking examples of this neglect to carefully evaluate the symptoms and diagnostic findings in each case before discharge from the hospital.

A child was admitted to the hospital with a history of a fall without any symptoms of cerebral compression or concussion. The only objective symptoms were contusion of the scalp and a moderate degree of swelling. Radiograph was taken on the same day and on the following morning the child was discharged before the report reached the ward, the explanation for his discharge being that the child's condition was unchanged since admission and it had not manifested any intracranial injury. However, the x-ray findings showed a linear fracture of the vault without any depression. The child was readmitted to the hospital for further observation and was discharged after several days without any complications.

Of the first group of cases that are presented here for discussion we find that in 4 of them there were no definite symptoms of temporary intracranial disturbances of sufficient severity to warrant a prolonged careful observation. These cases may show no evidence of fracture, by the x-ray findings, but further attempts should be made to ascertain whether there are any other signs of intracranial injuries that may and often do take place as a result of such trauma. The application of certain well-known and definitely established diagnostic tests is necessary in order to help one to arrive at definite conclusions as to the exact nature of the injury.

All cases should have repeated blood pressure readings and lumbar puncture when indicated. The progress of the patient should be carefully noted. A careful notation should be made as to the period of unconsciousness and when consciousness was regained. A careful follow-up of the end-results is very desirable. The value of lumbar puncture as a diagnostic aid is not questioned, but its usefulness as a positive therapeutic agent in the relief of increased intracranial pressure is still being questioned by some. J. F. Connors (Annals Surgery 1925) in his review of a large series of cases comes to the conclusion that the use of repeated spinal tests for the treatment of increased intracranial pressure has not proved of value and has many objections.

Sharpe holds that lumbar puncture with a pressure of over 12 indicates increased intracranial pressure. He advocates repeated lumbar punctures in all cases and emphasized its importance in determining the intracranial pressure, whether the expectant treatment is carried out or decompression is contemplated.

The modern tendency in the management of

skull injuries is toward conservatism. The pendulum seems to have swung in that direction. Before operations are resorted to, all other means for the relief of pressure are attempted and surgical measures are only applied when there are certain definite indications for operative interference, such as a depressed fracture with marked focal symptoms, or subdural hemorrhage. Simple fractures presenting very mild symptoms are usually subjected to lumbar puncture and carefully observed for variation in pulse, respiration, temperature, state of consciousness, etc. If after repeated lumbar punctures the pressure is found to be increasing or remains constantly high, a subtemporal decompression should be performed. All cases that respond to lumbar puncture showing even a slow but definite improvement should be treated by that means. The 3 most important diagnostic signs in determining the question of operative interference are: (1) Examination of eye-grounds; (2) spinal manometric reading; (3) general condition of patient, such as pulse, blood pressure and respiration.

J. F. Connors, in his report quoted above, reports his results in 497 cases in which a definite diagnosis of fractured skull was established. He divides them into 2 periods, the operative period 1914-1917 and the conservative period 1918-1924. In the first period, 18.7% of the cases were operated upon as against 9.3% in the last 7 years. Out of 218 in the first group, he found that 68 recovered without operation. In the 279 cases in the second group, 130 recovered without operation. This would indicate the value of the conservative treatment of skull fractures that is generally being adopted.

B. N. Carter (Annals Surgery 1926) in a review of 233 cases states that he observes all his cases of skull injuries for varying periods of time before any operative interference is offered. The only exception are those cases suffering from either depressed or compound fractures, or those giving definite symptoms of extradural hemorrhage. In such cases he advised immediate operation provided the general condition of the patient permits it. A persistent deep coma usually indicates serious intracranial damage and the prognosis in such cases is grave. All cases that show retention of consciousness even in the presence of other unfavorable symptoms, give a fairly good prognosis. A progressively deepening coma is indicative of unfavorable progress and immediate relief of pressure should be instituted.



# JOURNAL OF THE MEDICAL SOCIETY OF NEW JERSEY

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Each member of the State Society is entitled to receive a copy of the JOURNAL every month. Any member failing to receive the paper will confer a favor by notifying the Chairman of the Publication Committee of the fact.

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## CLASSIFICATION OF MEMBERS.

Enclosed in this Journal is a questionnaire form, and you are requested to fill it out at once and mail it to the Editor. A classification of our members, and particularly of those who are willing to participate in the Society's educational work will be most helpful to your officers who must devise and develop plans. Please give this your immediate attention.

## ARSENAL DISASTER.

In this issue of the Journal we are publishing an item concerning organization of the profession for medical relief work in the event of disasters of any size. The American Medical Association is sponsoring a plan applicable to city, county, state or nation, whereby members of the organized profession will render such medical services as may be called for and will coöperate with the Red Cross organization in any given area to effect prompt relief. The plan has been considered by a special committee, endorsed by the House of Delegates of the National Association, and is now referred to the State Societies for adoption. Your officers have the matter under consideration and the plan will probably be put into effect during the present fiscal year of the Society.

The terrible disaster at Lake Denmark, in our own state, when the arsenal was struck by lightning, was an object lesson in the way of emergencies. Fortunately, and to the great credit of the medical profession of New Jersey, there was no delay in responding to that relief call and physicians promptly appeared from all the neighboring towns and every in-

jured individual who could be reached was accorded immediate care. It is conceivable, however, that some such terrific disaster might occur in a region where relief could not be so promptly provided by volunteers and it is desirable to safeguard every part of the country by having an organized relief corps ready to respond to any call, regardless of its magnitude. Under the proposed plan, if the local city or county medical society representatives could not handle the situation they would in turn call upon the state and national bodies for assistance. It is a very proper precautionary plan and will doubtless receive the support of the entire profession.

## NO MORE DIPHTHERIA.

The title used above is that of a moving picture film prepared under the auspices of the Metropolitan Life Insurance Company for public educational work, and we believe it would make a good slogan for a state-wide medical campaign. In the present state of our knowledge concerning diphtheria there would seem to be good reason to hope that an energetic campaign will succeed in abolishing this disease from our community. By aid of the Schick test it is now fairly easy to determine whether an individual is possessed of a natural immunity to diphtheria. If such a test discloses that the person under observation is not immune, but is susceptible to the disease, it is almost equally easy to produce an immunity for him by administration of toxin-antitoxin, and the immunization thus induced is believed to be of a permanent character. This all sounds very simple, and it is theoretically as simple as it sounds. Like the famed recipe.

for making hare stew, however, one must first catch the hare; in this instance, one must first catch the susceptibles before they can be immunized and the disease be robbed of its possible prey.

That diphtheria can be abolished in any given district has been proved quite distinctly by the experience of the city of Auburn, New York, where no case has been observed during the past 2 years. What Auburn has done, any other city, or county, or state may do by following a similar course of conduct.

What is necessary to bring about complete control of this disease? Only a general concerted campaign to immunize the community. Effecting such a general campaign, calling as it does for the coördinated action of various factors, is not, however, as easy as one might wish; the campaign can not even be instigated by decree. It is fairly easy for the organized medical profession, speaking through the State Medical Society, to agree with the people's representatives, in the form of the constituted State Department of Health, to determine upon a campaign and to plan all of its details. Securing the active assistance of the individual physicians and the hearty coöperation of the citizenry is, however, a more difficult matter. The first thing to recognize is that success of any such campaign must depend upon the extent to which the "family doctor" gives it support. There is the crux of the whole disease prevention program. We do not mean to insinuate that the general physician is opposed to this or similar campaigns. Not at all. He will endorse by vote any campaign for limitation or abolition of disease; but will he give the essential features of the program that personally active support which alone can make a successful issue? The family doctor has practically the last word in these matters, for when the health authorities inaugurate a scheme for disease control and call upon the people to submit to testing and immunizing themselves or their children, it is to the family doctor they turn for advice. A careless response or a failure to explain away ignorant opposition or misconceptions of facts, may do much harm to development of the best made plans.

It is greatly to the credit of the medical profession that diphtheria is no longer destroying so large an annual crop of victims as was recorded but a few years ago. The mortality figures have been marvelously reduced, and when the diagnosis is promptly made and antitoxin properly administered a recovery is almost certain. It is still true, however, that the disease is far too prevalent in this enlightened state—more than 500 cases per annum regularly recorded in our city of Newark. Will the medical profession be any less earnest in its efforts to prevent such morbidity than it has been in diminishing the mortality? We believe it will not.

An effort is to be made to organize a definite campaign—a final drive—to eliminate diphtheria. Let every physician in the state stand ready to aid the health agencies to bring about this desirable result. Indeed it is not necessary to await specific advices; you may start work at once in your own locality. Advise the immunization of all children under school age, without preliminary Schick testing, and the testing of all older children and immunization of those found to be susceptible. That much every physician ought to be doing routinely. Then, when the campaign starts, he will be in a favorable position to help ferret out the remaining danger spots.

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## GROUP LIFE AND HEALTH INSURANCE.

The special committee in charge of this matter, reports substantial progress, but requests that we once again call the attention of members to the importance of immediate action if they desire to avail themselves of this unusual opportunity. The plan has been presented through the Journal to every member; circular letters were issued to all members in August and again in September; everyone should be familiar with all the details. A large number of the County Societies have endorsed the movement. It only remains now for individuals to file their subscriptions. It is important that you do this at once. Failure of a few to act now will forfeit all the possible benefits to the entire organization.



## Medical Ethics

### A BRIEF HISTORY OF MEDICAL ETHICS.

(Continued from September Journal)

(An article from the pen of the late George F. Keiper, of Lafayette, Indiana, as published in the *Journal of Indiana State Medical Association*, June, 1926, page 221.)

The oath of Hippocrates was the ethic of the medical profession until 1803. In that year was published *Percival's Code*. Thomas Percival, its author, was born September 29, 1740, in Warrington, Lancashire. He was orphaned at three years and raised by his elder sister. When ten his uncle, a physician, Thomas Percival, died, leaving him his library and a bequest of money. He was thus stimulated to study medicine and very wisely laid the ground work—its foundation in a first-class academic education, and when twenty-five received his degree from the University of Leyden. When twenty-seven he married Elizabeth Bassnet and moved to Manchester. He became a leader in medical and intellectual circles. Very wisely he began to write when twenty-seven, and his essay on medicine won him attention and reward in appointment as physician to the Manchester Infirmary.

His vision was very poor and he suffered severely with headaches. This would hazard a good guess that he was astigmatic. It made him reflective and introspective. He died in 1804. In a eulogy pronounced by the Rev. William Magee, later Archbishop of Dublin, "He was an author without vanity, a philosopher without pride, a scholar without pedantry, a student without seclusion, a moralist without moroseness, a patriot without faction, and a Christian without guile. The great object of his life was usefulness and the grand spring of all his actions was religion." (Locke.) As intimated thus he wrote much. One of his writings is entitled, "A Scheme of Professional Conduct Relative to Hospitals and Other Medical Charities", which became the Manchester Infirmary's code of actions. This was written in 1792. The whole code occupies fifty-six pages of octavo in small type, so extensive it is. It is divided into four chapters: (1) of Professional Conduct, Relative to Hospitals or Other Medical Charities; (2) of Professional Conduct in Private, or General Practice; (3) of the Conduct of Physicians Toward Apothecaries; (4) of Professional Duties in Certain Cases Which Require a Knowledge of the Law, the latter taking thirty-five pages to contain it.

Take Chapter I and Section V. Patients are to be interrogated in a voice not to be overheard. Secrecy and delicacy are enjoined. In Section VIII, no attention in prescribing is to be paid to the high price of drugs where necessary for relief. In Section XIII, frequent meetings of the faculty are enjoined to consider cases and operations. Section XVI provides for plenty of room for patients. Wards are not to be crowded. Section XVIII advises frequent consultations. In medical consultations the junior physician delivers his opinion first. In surgical consultation the junior surgeon first. In all, there are thirty-one sections minutely defining the subject matter considered.

In Chapter II he deals with Professional Conduct in Private, or General Practice, and it is divided into thirty-two sections. Section III, glowing prognostications are to be avoided because they savor of empiricism, by magnifying the importance of his services in the treatment or cure of the disease. In Sections IV officious interference is to be avoided. Sections VII-VIII provide for consultations and the manner of their conduct. The details are quite elaborate. In Section XI he recommends a regular academic education. Unnecessarily repeated visits are deprecated in Section XIII. The patient, even fatally ill, is to receive the same care and attention as though he could recover. A fee bill is recommended in Section XV. The circumstances of the patient are to be considered. Gratuitous attention to members of the profession, including apothecaries, is enjoined in Section XVI. Distant members of the faculty should pay traveling expenses. Clergymen receiving good salaries or possessed of fortunes are not to expect gratuitous service for they are not more privileged than any other order of patients. In Section XX physicians are enjoined to be careful in giving certificates excusing absence from duty in positions of honor and trust. Jury service is likewise regarded. Quack medicines are advised against in Section XXI. Neither should a physician dispense a secret nostrum.

The general welfare of the profession is to be constantly regarded and conserved. Medical disputes are to be settled by arbitration. Section XXV, a wealthy physician should not give advice gratis to the affluent because it is an injury to his professional brethren. Section XXVIII, calm reflection upon the termination of interesting and important cases, especially by death, is recommended that the review may be profitable to the physician. Discover, if possible, any mis-

takes in treatment. In other words, we are mentally to flagellate ourselves.

The apothecaries of one hundred years ago were a different class from the druggists of today. Apparently they had patients of their own, a practice in which some even to this day indulge in counter prescribing.

Complaint is made that the charge of apothecaries is, at times, extravagant. But he observes in Section VII, "Physicians are the only substitutes for physicians, surgeons for surgeons, apothecaries for apothecaries".

Endorsement is given to schemes to relieve indigent physicians and their families.

The fourth chapter deals "of Professional Duties in Certain Cases Which Require a Knowledge of the Law". This is founded on the British jurisprudence of that day, which held practically until this day in both Britain and the United States, for we obtained our jurisprudence from across the sea. In those days, as now, the doctor enjoyed "exemption from serving on inquests or juries; from bearing armour, from being constable and church warden, and from all burdensome offices".

It deals further with the duties of physicians relative to the last will and testament of the sick, with the treatment of lunatics. What is to be done in cases of sudden death as to the coroner, as to homicide, suicide and manslaughter. The laws of England guard with assiduous care the lives of infants, especially illegitimate or bastards.

Physicians are cautioned to have nothing to do with duelling, either as principals or attendants. Deliberate duelling, if one is killed, is murder.

Homicide by poison is elaborately considered. Social morality is prominent and the honor and chastity of the female sex are guarded from violence.

The physician in giving evidence is exhorted to give it in the simplest language possible.

All this is written in the peculiar style of the day with spelling of words which is now extinct.

The profession is under great obligation to Professor Chauncey Leake, of the University of Wisconsin, for bringing our attention to this remarkable code of ethics which is the foundation of all the codes on medical ethics which have appeared since, no less either than that of the American Medical Association.

Percival's Code, while very elaborate and suited to the need of Great Britain, yet contained so much of good for the profession everywhere, became the model for all codes since then.

In the early eighteenth century, continuing on for several decades, medical colleges multiplied rapidly. Many of these had no justification for existence being preparatory and serving mostly as advertisements for their respective faculties. Many, however, were practicing medicine without any preparation whatever, or at least a very meager one. Naturally, protest was inevitable from those who had taken pains and time and spent money to get a suitable mental equipment.

At Lexington, Kentucky, was located Transylvania University, which also taught medicine. One of its professors, Dr. Samuel Brown, M.D. (I use the M.D. advisedly) formed a secret society of physicians called Kappa Lambda Society of Aesculapius, and its members were bound to a rigid code of medical ethics. It seems there were a number of chapters of this organization founded throughout the country. But the movement was subject to attack and it disappeared. Nothing further is known of Brown, outside his activity in the organization of this society with its noble ideals. In 1832 the Maryland Medico Chirurgical Society published, "A System of Medical Ethics", prefaced thus:

"In the composition of this code of ethics, free use has been made of Percival's ethics, an abridgment of the same by the Kappa Lambda Society of Philadelphia, Gregory's Lectures on the Duties and Qualifications of a Physician, the Code of Ethics drawn up by the New York State Medical Society, that of the Connecticut Medical Society, Rush Medical Observations and Inquiries, and Lectures, and Ryan's Medical Jurisprudence by Griffith. This acknowledgment will render special references unnecessary (Leake). As intimated, Benjamin Rush, one of the signers of the Declaration of Independence, had published in 1794, "Concerning Observations on the Duties of a Physician, and Methods of Improving Medicine Accommodated to the Present State of Society and Manners in the United States".

In 1846 in Philadelphia was organized the American Medical Association. Dr. N. S. Davis, of Chicago, was largely responsible for the movement. Of course, a constitution and by-laws were adopted next year, together with a Code of Ethics which was founded on Percival's Code. This has undergone many modifications since then but the basic principles are all there. As to the changes necessary the latest addition was made a couple of years ago in Section 4 of Chapter II, entitled, "Advertising". The group idea in practice began to manifest it-



self in an obnoxious manner in several quarters by rank solicitation of patients, and also unethical advertising, and so the House modified that section to meet the new conditions.

We call our code now "The Principles of Medical Ethics" of the American Medical Association. The profession has for its prime object the service it can render to humanity; reward or financial gain should be a subordinate consideration.

Chapter I deals with the duties of Physicians to their patients and contains four sections. Chapter II, the Duties of Physicians to Each Other and to the Profession at Large, contains six articles of thirty-one sections. Chapter III, on the Duties of the Profession to the Public has four sections. The conclusion reads as follows: "While the foregoing statements express in a general way the duty of the physician to his patients, to other members of the profession and to the profession at large, as well as of the profession to the public, it is not supposed that they cover the whole field of medical ethics, or that the physician is not under many duties and obligations besides these herein set forth. In a word, it is incumbent on the physician that under all conditions his bearing toward patients, the public and fellow practitioners should be characterized by a gentlemanly deportment and that he constantly should behave toward others as he desires them to deal with him. Finally, these principles are primarily for the good of the public, and their enforcement should be conducted in such a manner as shall deserve and receive the endorsement of the community."

In Percival's code there are ninety-two sections which are quite voluminous in detail. In our Principles it is boiled down to thirty-nine sections, tersely stated and in advisory form, and suited to present medical and surgical practice.

The tendency of late years has been towards simplicity of statement in the matter of ethics. Because of the prostitution of surgery to commercial ends, the making of unnecessary operations, the secret division of fees and the generally poor service of hospitals, a new organization took form in 1912 in the organization of the American College of Surgeons, an outgrowth of the Clinical Congress of Surgeons of North America in November, 1912, and the organization was effected May 5, 1913, in the city of Washington, with an initial membership of 450, and it was the privilege of three Lafayette physicians to be among its first members, Drs. George K. Throckmorton, R. B. Wetherall

and George F. Keiper. It became instantly popular and at the time of the second convocation in Philadelphia over two thousand were enrolled as fellows.

Each fellow takes the following pledge which is the very code of principles of ethics:

"Recognizing that the American College of Surgeons seeks to develop, exemplify and enforce the highest traditions of our calling, I hereby pledge myself, as a condition of fellowship in the college, to live in strict accordance with all its principles, declarations and regulations. In particular I pledge myself to pursue the practice of surgery with thorough self restraint and to place the welfare of my patients above all else; to advance constantly in knowledge by the study of surgical literature, the instruction of eminent teachers, interchange of opinion among associates, and attendance on the important societies and clinics; to regard scrupulously the interests of my professional brothers, and seek their counsel when in doubt of my own judgment; to render willing help to my colleagues and to give freely my services to the needy. Moreover, I pledge myself, so far as I am able, to avoid the sins of selfishness; to shun unwarranted publicity, dishonest money seeking and commercialism as disgraceful to our profession; to refuse utterly all secret money trades with consultants and practitioners; to teach the patient his financial duty to the physician and to urge the practitioner to obtain his reward from the patient openly; to make fees commensurate with the service rendered and with the patient's rights; and to avoid discrediting my associates by taking unwarranted compensation. Finally, I pledge myself to coöperate in advancing and extending by every lawful means within my power the influence of the American College of Surgeons."

As a result of this movement, the standardization of hospitals was effected and to be upon the list of the college a minimum standard is necessary to observe. Its headquarters are in Chicago, and it is well housed. Its endowment fund approaches \$650,000. Its membership is 7,400. But there are 26,000 surgeons and 100,000 medical men in the country, besides. The impress made by this minority is felt by all reputable practitioners everywhere. So much so that the physicians themselves have organized the American College of Physicians, now four years old, and it has its pledge of fellowship:

"Appreciating deeply that the American College of Physicians has been organized for, and is conducted with the object of emphasizing, developing and propagating the

noblest principles and traditions of our calling, and having voluntarily sought to amalgamate myself with this college for the purposes specified, on this occasion, upon affiliating myself with the college, I solemnly pledge that I will live in strict conformity with its ideals, plans and regulations.

"Especially do I pledge myself to the practice of medicine in accordance with the high principles specified by the Hippocratic Oath, and with the universally recognized ideals exemplified in the 'Golden Rule': to consider ever primary to my own, the welfare of patients dependent upon my professional knowledge and skill; ever to respect the interests and reputation of my colleagues, as occasion requires to supplement my own judgment with the wisdom and counsel of competent medical specialists; to render my assistance willingly to my colleagues; to extend freely my professional aid to the unfortunate, the poor and the needy; to advance steadily in knowledge by the reading of authoritative medical literature, by attendance at important gatherings of medical men, by postgraduate instruction from men of eminence and position and by the free interchange of experience, and opinion of my associates.

"Further, I promise, in so far as in me lies, to shun the public press or public gatherings of laymen where my attitude might be regarded as seeking self advancement; to avoid selfishness and commercialism in my professional practice; to influence patients to appreciate their financial responsibilities to their medical advisors; to adjust my fees to the circumstances of my patient, and to make such fees commensurate with the services rendered and to avoid discrediting my profession by seeking unwarranted compensation.

"Moreover, I hereby condemn, and pledge myself to avoid, all questionable or abasing money trades with brother practitioners, or with consultants, and I hereby swear that, at all times, I shall endeavor to spread such ideal and high ethical mode of practice among those physicians with whom I come in contact.

Finally, I solemnly pledge myself to cooperate, by all suitable and just means, in extending and advocating the high moral, ethical and professional and scientific principles and the influence for good as specified in the constitution and by-laws of the American College of Physicians."

Both these documents are splendid and truly the medical profession, surgically and medically, has again put itself on record as

being utilitarian and idealistic, rather than egotistic; not self, but service; altruism the dominant note in service.

I cannot close this essay without referring to Dr. Frank B. Wynn, of sacred memory, a true physician, honored and respected, not only at home where we knew him so well but throughout the whole nation medically for his achievements scientifically and otherwise. He essayed some years ago to write on this problem and published serially in the Journal of the Indiana State Medical Association a series of articles on medical ethics, and he concluded the series with his Ten Commandments of Medical Ethics:

1. Reverence and Responsibility: Remember the Creator in the days of thy professional youth. Bow reverently before the wondrous human body, sick or well, as thou wouldst before a sacred shrine, conscious of thy high duty, and resolve to serve to the best of thy power, whether the patient be white or black, prince or pauper, saint or degenerate.

2. Historic Appreciation: Honor thy father and thy mother. Likewise, give praise to the father of medicine whose rich heritage of scientific and clinical truth has been handed down to thee through centuries of patient toil. Hold fast to that which is good, but let not prejudices, coming out of the past, blind thy vision to the newer truths of medical advancement.

3. Keep the Faith: Thou shalt not worship the graven images of false practice, of avarice and selfishness, which eat at the very heart of medical idealism; of clever artifice or brazen quackery which knowingly deceives; of erratic isms and cults which tell but half truths, leading the ignorant and unwary astray.

4. Inviolable Confidences: Thou shalt not disclose the secrets confined to thy keeping by trusting patients, unless they be of criminal or treasonable import. Nor shalt thou abuse the intimacy granted thee by women, which becomes a professional and moral obligation thou shouldst hold inviolate.

5. The Sanctity of Life. Thou shalt not hazard life unwarrantedly. Neither shalt thou shirk before the obvious perils of duty when life is at stake. The unborn shalt thou not destroy, except after due consultation it is deemed advisable for the larger saving of life. Suffer not death to come through neglect in the care of the sick, nor from failure in reading, study and counsel, to gain the greatest benefit for the patient.

6. Professional Coöperation: Thou shalt not bear false witness against a worthy pro-



fessional brother, but seek even to protect his reputation from calumnious attack by misinterpreting laymen. Of thy knowledge give him unstintingly, counselling and co-operating for medical progress.

7. Gentlemanly Conduct: Thou shalt not prate of cases, nor countenance unseemly boasting of thy achievements in the lay press. Always a gentleman, let thy conduct be reserved but without flattery; dignified but of a warm heart; tender in ministrations, but firm in command; clean of body, speech and mind.

8. Honest in Business: Thou shalt not steal; neither shalt thou make extortionate charges nor deceive by the secret division of fees. Let thy service be worthy of hire for which exact fair compensation, but by open methods, with conscience void of offense toward thy fellow men.

9. Obligation to One's Own: Take heed of the morrow for the sake of thine own flesh and blood. Therefore shalt thou keep orderly accounts, collecting from the full handed just recompense for service rendered. To the poor and to families of deserving colleagues thou shouldst account it a privilege to render faithful attention.

10. Personal and Public Service: Remember thou art thy brother's keeper physically in the measures advised for the prevention, alleviation or healing of disease; spiritually in the cheer thou bringest to heavy hearts and the courage thou givest to halting steps. So walking upright before man, mayest thou show thyself approved unto God. Thus journeying toward life's end, if not singing with the Psalmist, "My cup runneth over", thou wilt at least be sustained by the reflections of "A workman who needeth not be ashamed".

Soon after writing the above Frank Wynn suddenly did come to life's end, no doubt singing with the Psalmist the concluding words of his Ten Commandments.

Medicine is a profession for good men.

I have stated that the tendency is towards simplicity of statement or rather back to the simplicity of statement for did not the Great Physician after all give us in a few words the real essence of it all when he said: "That which ye would that men should do to you do ye likewise to them".

#### Ananias, D.D.S.

Dentist—"Now open your mouth wide and I won't hurt you a bit."

Patient (a few minutes later)—"Doctor I know what Ananias did for a living."—(Boston Transcript)

## Esthetics

### THE FRUIT OF THE FAMILY TREE

(Continued from the September Journal.)

#### Woman's Place in Race Improvement.

We come now to the practical application of some 300 pages of fascinating reading—superlatively fascinating in that most of it seems to each reader to bear such a vitally personal message—and in race improvement, as in other matters, when it narrows right down to executive detail, woman's place is no sine-cure. "To make her natural passion her political platform" she must be on intimate terms with biology, sociology and legislative procedure. She will then be qualified to enter, and eventually take with her the human race, into Eugenics—the land of the well-born. As the author points out, this is a most misunderstood realm, synonymous in the minds of the uninformed with sex hygiene, vice campaigns, personal health certificates before marriage, free love, trial marriage, "breeding human beings like animals", killing off weaklings or scientific love making. It is none of these things, although some of them are excellent public measures with possibly limited bearing upon the character of the next generation. Eugenics "has to do only with those agencies which will improve or impair the inborn health and quality of the children yet unborn". Since this takes in almost the whole range of economic, educational, social, political, moral and religious agencies, the gamut of normal feminine interests would seem to be pretty well covered.

As one first plank in her platform, the woman voter should advocate a survey of the human family and its biologic assets—its physical stamina and mental soundness. The pedigree of every family in America should be placed on record (as are those of pedigreed hogs, mules, horses, sheep, cattle and goats).

"... scarcely one person in a hundred knows even the names of his 8 great-grandparents, let alone their achievements, character, diseases, defects and virtues—in short, the quality of blood now coursing in his own veins, which largely makes him what he is, determines mainly his health, character, length of life and happiness, and will enormously influence the health, character, happiness and length of life of his future children."

It will be argued that young people in love are not going to pick their mates out of a pedigree book; nor is this what the scientist expects. The psychologist does not believe, on the other hand, that marriages are altogether made in heaven; he knows that styles in wives and husbands change with nearly every generation and that selection is largely in-

fluenced by early education. All this new and wonderful knowledge, instead of taking away from, has in the author's belief only added to, the romance of love, marriage and children. Can anything more completely blast the romance of marriage than defective, neurotic, uncontrollable children? Does anything preserve the romance more permanently than healthy, happy, well-born children? When young men and women realize that they are the guardians of this precious heredity carried in the tiny germ-cells—the dignity, responsibility and beauty of marriage is bound to be elevated.

Another plank in woman's eugenic platform should be the establishment in every state of a State Board of Heredity and Eugenics, which, in addition to coöperating with many existing boards, would study the probable eugenic or dysgenic effect of every proposed piece of legislation. The thing of prime importance is that woman is now a free political agent and her natural instincts are those which minister to race conservation and race improvement. If women are merely to fight and scramble over the same old political questions, they will merely increase the quantity of politics without adding anything to its quality. If, through woman's freedom and power, eugenics should take its place among the great religious movements of mankind, tuberculosis would soon become as rare as a solar eclipse, and feeble-mindedness, insanity and pauperism, with all their associated crime, could be well-nigh banished from the world.

### Can We Make Motherhood Fashionable?

Turning to the obvious biologic aspect of woman's place in race improvement, our author finds even desirable and desiring parents hedged about by many obstacles, chiefly economic and often taking the form of the "No Children" sign on apartment houses. To offset this state of affairs he cites several instances in which the landlord not only offers a bonus for every baby born to his tenants, but provides play-rooms, gymnasiums, sun-parlors, a baby carriage garage and a place to make mud pies! "No doubt thousands of babies have never been born because the parents had no place for them to make mud pies." Another hopeful sign comes from a survey of 40 leading apartment houses in Washington, D. C., showing that while 11 refused dogs, only one refused babies. "So at least it seems the baby is beginning to win its fight against the poodle." A further encouraging factor is the institution, in schools and colleges, of scientific courses of study concerned with problems, privileges and duties of motherhood. Of even more favorable portent for race im-

provement is the fact that more than 100 colleges have established courses in heredity and eugenics, including studies of the pupil's own family histories. It is true, of course, that vast numbers of women are deliberately refusing motherhood. But it can be asked if these are not the very ones that might just as well be weeded out because of their selfishness? The new education will appeal to those young men and women richly endowed by nature with the great human emotions, imaginative, idealistic and aspiring—the desirable type to be perpetuated.

We must accept as a fact, proved by Professor Karl Pearson, that one-fourth of the married people of each generation produce one-half of the next. "This is one of the greatest warnings that modern biology has issued to statesmen." And it is to be noted further that in our time the lower, more incompetent one-half is producing about three-fourths of the next generation. Such a program would wreck the stock of any breeder. Just here biology warns the statesman, the educator and philanthropist that unlimited charity and hygiene will not stay the hand of nature. Charity which permits its votaries to reproduce "creates half the misery of the world", and "charity will never relieve one-half the misery which it creates".

"But if motherhood can once more be made a fashion among the better one-half, and sound housing, economic and labor conditions set up, so that these stocks can be induced to produce more than their share; if the lower one-half, by the diffusion of birth control and many other measures which are not repressive nor lacking in true humanitarianism, can be so educated that it will produce less than its share, the central problem of race progress will be solved."

### Birth Control—A Two-Edged Sword.

The power to produce or withhold the lives of children at will is the most dangerous two-edged sword ever placed in the hands of human beings. If it cuts with one edge it will be an instrument for racial salvation. If it cuts with the other edge it will bring every civilization which tries it to its day of doom. The one central question is, who is going to have the children—the wise, provident and strong, or the weak, thoughtless and stupid? The plain fact is that if civilization is to continue, the higher classes must have more children. For numerous statisticians have proved that unless an average of  $3\frac{3}{4}$  children are born to every couple who have any children at all, the race will gradually die out. Therefore, since some women can not have children, and some will not, and some do not marry, and some children die, it is clear that some women must go on producing 6 to 10 children.

The Birth Control Congress, held in Novem-



ber, 1921, in New York, passed a resolution stating that the purpose of the Birth Control League is to encourage good sound families among our abler and more successful stocks. Had this resolution not been passed, every biologist and true eugenicist would have left its ranks. It is to the interest of every lover of America, and of humanity to study and understand this problem of birth control. It is the central, outstanding fact of modern civilization. In the little country of Holland 50 birth control clinics have been established where parents may receive individual advice.

"It is a travesty upon American civilization that such clinics are not now in full operation in every town and hamlet of the nation. This advice should be given at the lowest possible charge, and to the poor who need it most it should be given free. It is enormously in the interest of the abler classes to pay this expense."

"Within 15 years, according to Professor E. M. East, of Harvard University, we shall need every ounce of food our soil can produce to feed our own people. Now whether when we reach war and famine we shall be fighting each other for food, or shall be an upstanding breed of free and able people, our upper classes constantly producing a little more, and our lower classes a little less than their share of children, and thus slowly marching toward health, beauty, strength and sanity in the race, is entirely in our own hands. Every biologist, every statistician, and every student of the factors that make races and men, knows that beyond the horizon lie just two things. One is race improvement through rational birth control—a gradual decrease of the badly born and an increase of the well-born—the other is Armageddon."

### Does Heredity or Environment Make Men?

All men are born unequal. In all the common rights of man—the right to life, liberty and the pursuit of happiness—the world now concedes that one man is a good as another. But the more you equalize opportunity, the more you unequalize men. The more you develop and educate inherent differences, the more they grow into larger differences. The question at issue in this world old heredity-environment debate is what causes these differences.

That it is impossible to separate heredity from environment is probably true when we consider merely one individual. For all we know, a man may commit a particular crime or take a particular drink entirely from environment. And it may be that he can be prevented from performing these particular acts entirely from environment. But when it comes to the question as to which one of two individuals is the more likely to commit crime at some time in his life or to take to excessive drink, we are in reality dealing with a different set of scientific problems. Therefore we can not consider the heredity-environment problem with much assurance of success, either

in method or logic, unless we consider it as the problem of differences among men. And since the prizes of life are nearly all relative matters, the result is that heredity is the most important factor in determining who shall secure these prizes and who shall not. Those who cite the Civil War as the opportunity which made Lincoln immortal, should bear in mind that the same opportunity existed for the 4 or 5 million other men who were born and grew up about the same time, and that even the men in Lincoln's cabinet, who had the stimulus of his overwhelming personality, did not become Lincolns.

A man gives to his environment and receives from it just in proportion to the richness of his own nature. The things which men can do depend upon the tools that are at hand in the form of environment, social organization, ideals and systems of education. But what each man does with these tools depends almost entirely upon his individual in-born heritage.

The tangle of heredity and environment may be much simplified by the example of James and George—two brothers in whom there was no marked outward difference. Their parents tried to treat them exactly alike, but James was always late; George was prompt. James fell behind at school; George shot ahead. Thirty years later George was in the U. S. Senate, while James was keeping a fourth class pie counter. George married into a prominent family and has two children of marked promise; James married a woman of his own type and his two children show every promise of carrying on the pie counter.

The inspiring fact about all this to the author is the proof that we are not slaves but masters of our environment. If environment had the power to change fundamental character, no one could tell what sort of person he might be 20 years hence. Karl Pearson has said, "It is man who makes his own environment, and not environment that makes the man." Life is self-expression, self-realization. Study the lives of your immediate ancestors. You probably have a great deal of good heredity going to waste. It is your duty to use all your inherited powers in building an environment in which both you and your descendants may make the noblest practical achievements. Instead of being antagonistic, heredity and environment are reciprocal agencies, both placed by science within the grasp of man, by which he can lift his species out of the bloody sea of natural selection and fare more happily forward. The Garden of Eden is in the future, and the trees of knowledge grow all along the highway that leads to it.

## What the Doctor Can Do to Improve the Human Race.

One naturally thinks of the physician first as the one who comes most directly into contact with life at its beginnings, the one who comes more intimately into the secrets of the human heart than any other person in the community. It is true that he must devote his skill and knowledge first to healing the sick and patching up the sort of people that are already born. But every physician must long for a time when people are born better, stronger, and freer from defect and disease. If we had some magic potion that we could administer to the parents to insure them healthy and intelligent children, children that would never need physicians, there is no doctor worthy the name that would not gladly destroy his own profession in order to attain such a happy consummation. But since no such medical magic is at hand, if you are a physician you can do some very practical things which will in a predictable way project the effect of your advice down the stream of time; advice which, when you are gone, will leave a trail of inborn health and vigor to the children that are still in the womb of the future.

It seems to me, were I a physician, says Wiggan, and I know a number of physicians who feel as I do, that, when I came into a community, I should as rapidly as possible learn the histories of families in the neighborhood, especially those of my own patients. I should, in so far as time and money permitted, chart out these family histories for my own reference or that of my colleagues, and carry as many of the marriages and the type of children that had resulted from them as I possibly could in my memory. A physician should be something of a genealogist. He is frequently consulted about proposed marriages and also by parents as to the advisability of bringing more children into the world. A knowledge of heredity and a fund of information gained by long intimacy with this particular family and its ancestry will aid both him and his patient at this important juncture. He need not become an expert in genetics and the mathematical analysis of hereditary complexes, but there are some things so obviously due to heredity that he can make his advice sane, cautious and effective.

In addition, physicians are often called upon to speak at community meetings where social problems are up for consideration. At such times, short talks about heredity, marriage selection, the value of inborn mental and physical soundness, with perhaps a chart or two of some family pedigree where the names are not disclosed can be made valuable in bringing the lesson of eugenics home to the every-day man.

## Lay Mirror Reflections

### THE PROBLEM OF EXPERT TESTIMONY.

The New York Herald-Tribune, June 12, 1926, presented an editorial which set forth in succinct form the views held by most physicians on the question of expert testimony at court trials. The State Society has, through its Welfare Committee, been considering this problem for several years and will continue its efforts to bring about some more satisfactory court procedures. The State Bar Association has promised to coöperate, and there was introduced at the last General Assembly an act to improve the situation by providing for judicial appointment of impartial witnesses. The measure never came out of committee. Doubtless the Assembly is not sufficiently well informed as to the need for such a law, but it must come in time.

The editorial quoted below refers to action taken by the American Psychiatric Association at its Annual Meeting in June last:

"The report of its legal committee, presented this week to the annual meeting of the American Psychiatric Association, contains a recommendation which deserves indorsement and acceptance, not only for questions of insanity, but for all scientific or technical matters concerning which special experts are called upon to assist the machinery of our courts. The committee recommends that experts called to testify in insanity trials should do so impartially, instead of being, as they now are, partisan contestants for one side or the other of the case.

"The excuse for bringing special experts into court at all is that the case turns to some degree upon technical matters which only those of special training and experience are competent to understand. In theory, the experts explain these matters to the judge or jury. The usual machinery of legal decision can then proceed. This works well enough if the experts are competent and impartial. The facts and opinions of science are seldom complicated. It is not difficult to explain them clearly if one tries hard enough. At present, however, it is too often the aim of the experts to explain only half of the facts; to emphasize the considerations favorable to one side and to suppress those which might benefit the other side. Justifiable as this attitude may be for legal counsel, who are frankly and necessarily partisan, it is entirely improper when applied to expert testimony. Too often the judge and jury are left more befuddled than ever, their only recourse being to decide the case on other considerations, without benefit of science at all.

"So great has grown the scandal of this situation in the minds of conscientious scientists and engineers that many leaders of these professions now refuse to testify as experts unless by stipulation of both sides, or by direct appointment from the court. This is the plan which the committee of psychiatrists now support. Its only difficulty is that of how to pay the experts. The fees of well-trained men are necessarily high. Litigants will pay these fees if direct advantages



are to be expected, but not otherwise. Public funds are always insufficient. There is one possible solution; a radical one, but probably not unthinkable. It is to ask recognized experts to testify impartially, when requested by a court, either without fee or for a fixed and moderate one. The medical, scientific and engineering professions are probably quite public-spirited enough to do this, to a reasonable extent, if the legal machinery can be adjusted to permit it."

### GOLF SUICIDE.

Under the above title, the New York Sun, March 31, 1926, published the following editorial:

The term "golf suicide", coined by Dr. M. J. Seifert of the Gorgas Memorial Institute, is a felicitous expression for an unpleasant phenomenon. It should be useful to a public which is captivated by fanciful phrases and is often led into a wise course of action by some striking formula of words.

Dr. Seifert defines golf suicide as death on the golf course from heart disease which was unsuspected by the sufferer. He goes on to explain that such deaths would be preventable in most cases if 'every golfer over 50 would precede his playing season by a thorough physical examination.'

That is a sound and sensible suggestion. Nothing is more difficult than to convince the average man of middle age that he is of middle age. As long as he 'feels all right' and is able to take his nourishment regularly and easily it is pretty hard to get into his head the fact that bones, tissues, muscles and internal organs are not what they were when he was younger. They may in fact be in excellent condition when the man's age and environment are considered, and yet be wholly unadapted to strenuous exercise they might have performed without risk but a few years before. Thus moderate indulgence in golf might be wholly salutary for a man to whom overindulgence would be dangerous.

It is one of the notions in which the average man takes most pride that his own body knows what is best for it. There is a good deal of truth in that too, but it is by no means wholly true. Nature has a way of going on by covering up for a long time defects she does not repair. Many a man deceives himself with the false exhilaration which sometimes comes from fatigue, thus keeping active beyond the safety line. And when nature does present a bill for deferred payments she is a harsh and exacting creditor.

The answer to all this is simple. It costs very little in time and money—less of both than the total expense for a golfing week end—to go to a physician once a year for a physical inventory. Anybody who can afford to play golf can afford to see a doctor. In health as in all other things knowledge is power. The man who knows his own weaknesses and knows them in time has already gone a long way toward correcting them, if correction be possible, and toward easing the strain on them if they cannot be corrected.

### COMPENSABLE DISEASES.

Under Workmen's Compensation Law.

In the July Journal, the Commissioner of Labor, Dr. McBride, called attention to the increasing number of diseases for which com-

pensation is now allowable under the New Jersey law and asked for the prompt recording of all cases.

An interesting note on this topic appeared in the Newark Evening News, May 7, 1926:

### OCCUPATIONAL DISEASES INCREASE WITH INDUSTRY.

Passage by the Legislature of the Roberts bill, placing radium necrosis in the list of compensable diseases under the workmen's compensation act, may have been a factor in the settlement out of court of three suits based upon claims for damages due to deaths charged up to that new industrial ailment. Not that the law was retroactive, for it could not be, but the Consumers' League, sponsor of the bill, backed by other women's organizations and union labor, had devoted much energy to obtaining evidence from experts to show that the disease was occupational in character. The new act, which is Chapter 31 of the laws of 1926, was real welfare legislation.

It took a good many years to put occupational diseases into the workmen's compensation act. The main act was passed in 1911, the first year of the Wilson administration at Trenton. In 1914 lead poisoning was recognized as an occupational disease and safeguards against it were provided, with penalties for infractions. But it was ten years later when the supplement was passed providing for the compensating of workmen contracting any one of nine occupational diseases—anthrax, caisson disease, and poisoning from lead, mercury, arsenic, phosphorus, benzene, wood alcohol and chrome. The law this year adds to the diseases listed in the supplement of 1924 mesothorium, or radium necrosis.

This list is likely to be extended in the future as new processes of manufacture and the use of new chemicals further widen our manufacturing life, but where it can be shown that a new disease is occupational in character it will not be necessary to go through the long struggle of the past decade to have that fact recognized in connection with the workmen's compensation act.

### In Lighter Vein

#### Retort.

'What you don't know  
Won't hurt you.' So he said.  
That's all the answer I could get,  
And yet  
This thought came to me late, when  
time had sped:  
'For you it's lucky so—  
For otherwise you would have been,  
I'll bet,  
An undertaker's client long ago!'

(S. R., in Life.)

Prof—Now as you all know the law of gravitation explains why we stay on earth.

Stude—But how did people stay before the law was passed?—(Rutgers Chanticleer)

It is estimated that the total cost of government in this country last year was \$10,252,000,000—proving again that the American people will pay almost anything for amusement.—(Life)

## Observations from the Lighthouse.

### RADIOLOGY IN GENERAL PRACTICE.

Despite the many years during which x-rays and radium have been available for diagnosis and treatment, the average practitioner does not fully realize just what service the radiologist can render both him and his patient. That the radiologist should be treated as a consultant rather than as a mere technician is the plea often reiterated by these specialists and it is voiced again by Joseph Aspray (Northwest Med., 25:302, June, 1926), in a paper which briefly outlines a few of the many ways in which the radiologist can be of distinct help in the diagnosis and treatment of disease.

In injuries to the bones and joints, fractures and dislocations are clearly shown, reduction has been made more sure, the progress of union can be followed, callus formation can be demonstrated, osteomyelitis in its chronic stages can be identified and the type and extent of bone tumors can be determined by x-ray examinations. In the region of the skull, aside from the question of fracture, a roentgenogram will give information with respect to the type of mastoid present, its extent, and the presence or absence of indications of infection. It also gives the relative position of the lateral sinus, important knowledge for the operating surgeon. Examination of the sinuses shows their size and density. The function of the x-rays in regard to crowned, heavily filled and devitalized teeth is well known. Within the chest minute abnormal densities are detected which can not be found by any other method; tuberculous lesions are demonstrated before clinical chest findings are present; the extent and location of the tuberculous process, its general type, the presence of cavities, the amount of exudative inflammatory reaction, the presence of pleural density and effusions, secondary evidence of the latter and distortion of the mediastinal viscera as the result of fibrosis and adhesions, and in most cases the activity of the tuberculous process, can be quite accurately determined from an analysis of the x-ray findings. Lung abscess gives a dense area of inflammation; after evacuation the resulting cavity is clearly shown and its progress followed; bronchiectasis can be detected and pneumoconiosis can be differentiated from chronic pulmonary tuberculosis. Lung tumors may be located in time for beneficial therapy.

Examination of the esophagus by a thick and thin barium meal will demonstrate filling defects due to pressure of extrinsic tumors, cardiospasm, diverticula, stenoses and dilatation. Gastric ulcer can in the majority of cases be detected, the defect in outline, gastric stasis and alterations of motility and peristalsis being frequently shown; often the mucosal pocket can be well demonstrated. Gastric cancer gives characteristic filling defects, ragged in outline. Duodenal ulcer gives both primary evidences in the duodenal outline, as filling defects, pockets and spasm, and secondary alterations in the motility and peristalsis of the stomach. Gall-bladder disease has definite manifestations. Recently the use of sodiumtetrabromophenolphthalein and sodiumtetraiodophenolphthalein intravenously, the latter of late by mouth in enteric coated capsules, has given a valuable means of estimating gall-bladder function and condition. A normal gall-bladder fills with this drug, which is excreted by the liver and casts a definite shadow on film

examination. A pathologic gall-bladder, or one in which the duct is stopped by a calculus, fails to fill in the usual time, or fills imperfectly. In intestinal malignancy the location determines to some extent the operative procedures. Chronic appendicitis gives quite definite signs.

X-ray examination of the genito-urinary tract can show a large percentage of calculi, localization of which can be made with the assistance of the ureteral catheter. Injection of the renal pelvis and ureter with an opaque medium will reveal abnormalities in outline.

The field of Roentgen and radium therapy has only been scratched, not cultivated. Some of the more important conditions in which the value of radiation therapy has been well established include: tuberculous adenitis; hyperthyroidism, with or without goiter; epithelioma; ulcerating carcinoma, inoperable; glandular metastasis, before and after operation; sarcoma, where thorough surgical measures are precluded; Hodgkin's disease, in which results are striking; leukemia; fibroid tumor of the uterus; fibrosis uteri; hemorrhages of the menopause not associated with malignancy; about 9% of skin diseases, including carbuncle, acne, dermatoses, eczema, keloid, psoriasis and rodent ulcer.

In return for the help which the radiologist gives the physician, Aspray suggests that the former be kept in touch with the progress of the patient and the operative findings, with a note regarding the correctness and completeness of his diagnosis.

In discussing "Radium and X-ray Therapy in General Practice", I. J. Murphy (Radiol. Rev., 3:62, May-June, 1926) says while any competent physician under proper supervision can make many of the radium applications, only a few specialists can master the exacting technic of deep x-ray therapy. Radiotherapy of conditions above the clavicle should be regarded as a specialty. On the other hand, intra-uterine applications are standardized. Too often the family physician allows patients in need of radiotherapy to delay overlong or drift into incompetent hands. In most instances where x-ray work is required, however, patients should be referred to a reliable roentgenologic consultant. X-ray machines are in such general use that it is impossible for the makers to keep their equipment out of the hands of the unscrupulous, so one sees inexcusable disfigurements, unnecessary sterilization of young women, and cancer patients drifting past hope.

For conditions above the clavicle radium may be given preference over deep x-rays; sometimes a combination is required. Since lesions in these parts are accessible, direct application of radium can be made and dosage accurately gaged. This will result in the minimum of local scar tissue and there will be no undesirable blocking of distant lymphatics such as sometimes results from extensive deep x-ray treatments about the head. Radium also has an advantage over deep x-rays in treatment of diseases of the female organs. In the young woman it is easier to select the proper dose—one that will control but not stop the menstrual function. At the menopause, radium has the advantage of acting mainly on the uterus and not on the ovaries. Accordingly the internal ovarian secretion, or hormone, which is important for the well being, continues to act even after ovulation ceases. When x-rays are used there is such a scattering effect that this internal secretion of the ovaries is usually checked.



The public will soon learn what to expect from radium therapy. The knowledge that a simple application may give relief where a mutilating operation was indicated a few years ago should make women anxious to consult physicians early. To give some radium treatments is even less difficult for the physician than to apply proper dressings.

Intra-uterine applications are being successfully used for excessive menstrual flow, chronic endometritis, or delayed menopause and fibromyomas. The author has also successfully treated several cases of sterility resulting from chronic leukorrhea, and in which the women have since given birth to normal children. Depending upon the condition to be treated from 25 to 100 mg. radium are placed in the applicator. Uterine applications may vary from 5 to 30 hours, the average duration being 24. In the average patient under 40, with a non-malignant condition, one gives about 500 mg. hr. of treatment (25 mg. for 20 hours, or 50 mg. for 10 hours). The average patient over 40 is given about 1200 mg. hr. (50 mg. for 24 hours). This is a sterilizing dose. When malignant growths are accessible the treatment of choice is to implant radium needles or emanation tubes. In addition to local application, the lymphatics of the area are given appropriate x-ray or radium treatment for deep effect. For the latter, radium is placed on a block of wood or other suitable material, to hold it at a distance from the skin. Toxic goiter and tuberculous and malignant glands are treated in this way; the method may also be found more convenient for treating tonsils than imbedding radium needles. Radium in the form of flat applicators or plaques is used in superficial conditions, being placed directly over the lesion at a distance varying with the degree of penetration desired. Applicators are of standard dimensions, sizes, filtration and radium contact. Accordingly, the time and distance for treating a given lesion can be accurately determined.

Any physician may engage a radium consultant just as he does any other specialist. A more general but correct use of radium by the average physician will tend to make patients seek advice earlier; it will also keep many from being injured by untrained "x-ray therapists", and it will eventually reflect credit upon radiotherapy in general.

Deep x-ray therapy is possibly the most exacting specialty in medicine today. Each patient requiring this treatment presents an individual problem in both physics and medicine.

### Thoracic Radiography.

Considering radiographic examinations from the standpoint of diagnosis in chronic respiratory infections, Chester A. Stayton (J. Indiana State Med. Assoc., 19:193, May, 1926) notes the great advance made possible by the advent of the stereoscopic x-ray examination which affords indirect visualization of the thoracic viscera in 3 dimensions without superimposing the shadows of both sides of the chest wall. He calls attention to the fact that the lack of accepted standards for normal x-ray shadows, and the variation limits of these shadows have led to many indefinite terms for describing slight changes (such as "peribronchial thickening", "swollen trunks", "intensity of trunk markings", etc.) which are present in a large percentage of the chest films of individuals without any clinical symptoms and are therefore not trustworthy as being diagnostic of definite organic changes. Faulty tech-

nic will also magnify the normal trunk and linear markings.

The chronic suppurative infections are lung abscess and lung gangrene. The lung abscess is usually a basal lesion and appears as a circumscribed homogeneous shadow, or, if necrosis has taken place, it will appear as a thick walled annular shadow with or without fluid. The presence of fluid and the absence of apical parenchymal densities will differentiate it from a tuberculous cavity. Bronchiectasis is seen on the film as a basal density appearing as irregular multiple dilatations of the main stem bronchi. The clinical history of bronchiectasis should be obtained before a Roentgen ray diagnosis is justified unless it is a very unusual case. Thoracic tumors and malignancies present various x-ray pictures. They usually originate in the mediastinum and protrude as smoothly outlined homogeneous densities into the lung fields; they may be differentiated from aneurysms of the aorta by pulsations and changes in position during deep inspiration. Pneumoconiosis presents irregular, ragged shadows of variable density, usually bilateral and extending out from the hilum. Pleural effusions and empyema are most often basal and will present a changing fluid level if associated with pneumothorax. In extensive cases the entire lung may be involved. Infiltrations in the lung caused by syphilis are usually basal, near the mediastinal shadow, and have the appearance of an area of localized pneumonic infiltration.

Pulmonary tuberculosis that produces constitutional symptoms and physical findings also produces characteristic shadows on x-ray films which indicate accurately the type of pathology, its extent and exact localization—3 factors which are of great importance in outlining treatment and making a prognosis. The infection by the tubercle bacillus results in the formation of tubercles, both single and conglomerate. Around these foci of infection is thrown out an exudate which is limited to the secondary lobule and produces the fan-shaped shadows on the x-ray film. As the lesion progresses and the protective power of the patient asserts itself, connective tissue proliferation takes place. The amount of fibrosis laid down is in direct proportion to the extent of the infection plus the immunity of the individual. This shows up very beautifully in the films of adults over 30 years of age who have had repeated reactivations of apical lesions. In caseous bronchopneumonia the x-ray densities are homogeneous, of sharp outline, and have the raisin-on-a-stem distribution. These may become confluent and simulate tuberculous lobar pneumonia. Caseous lobar pneumonia makes a homogeneous shadow and occupies a part or all of one lobe. This type of lesion breaks down very rapidly, producing cavities, and is most often found in cases of massive infection with pronounced clinical symptoms. The prognosis is hopeless.

In the treatment of tuberculosis by pneumothorax there is no method of diagnosis comparable to the x-ray in estimating the amount of collapse, the presence of adhesions and the need for further injection of air.

The technical requirements for a good roentgenogram are as follows: (1) Both films taken while patient holds breath; (2) patient in an upright position if possible; (3) rapid exposure, 1/4 to 1/20 second for each film; (4) precision equipment for shifting tube and film; (5) tube at least 30 in. from patient. These pictures are taken postero-anteriorly, with the patient facing

the film, and the film at right angle to the tube. Right or left oblique and lateral views are valuable in studying mediastinal conditions. Good photographic work is the first essential to correct interpretation and may be judged on the following points: (1) A clear view of the first rib on either side; (2) complete visualization of the diaphragm and costophrenic angles; (3) a distinct outline of the lumen of the trachea and the right and left bronchus; (4) an accurate stereoscopic image with 3 dimensions. Each patient should be fluoroscoped at the same time that the films are made in order to study the mobility of the chest wall, the diaphragm, and their relation during respiration to intrapulmonary and pleural pathology.

During the last 8 months 715 patients were referred to the x-ray laboratory in the U. S. Veterans' Bureau Clinic for an x-ray report on the chest. It is the practice of this clinic to refer only those cases for an x-ray study in which there is some question as to the diagnosis, or to determine the progress of the patient under treatment. Of the total number, 514, or 71%, were definitely classified by the stereoroentgenogram. The remaining 201 cases, or 29%, presented shadows which warranted a diagnosis of "suggestive of inactive pulmonary tuberculosis". Of this latter group, 46 showed evidence of an associated nontuberculous respiratory infection. Of the total showing pathological changes, 95, or 14.5%, presented definite shadows indicating some form of pleurisy.

In concluding his paper, the author says that postmortem examination has proved that pathology in the lung as shown in the x-ray stereogram varies in quality and degree of density from the dark to the light shadows as follows: (1) serous exudate, (2) cellular exudate, (3) fibrosis, (4) caseation, and (5) calcification. On this hypothesis a good stereoscopic image of the lung will provide a method of studying pathological tissue change in the living host in much the same manner as that in which the pathologist makes gross observations at the autopsy table.

Stayton repeats the assertion that the roentgenologist be considered as a consultant rather than a mere technician, and that he should be provided with some knowledge of the history, symptomatology and physical findings. He should not make a clinical diagnosis, no matter how positive his findings, but he should render a complete word picture of everything abnormal in the films and conclude with a diagnostic summary or x-ray diagnosis. Attention is again called to the fact that an x-ray diagnosis of pulmonary tuberculosis is never warranted on enlarged trunk and linear markings and hilum infiltration. There must be definite parenchymal infiltrations of different densities.

#### X-Ray Study of Maxillary Sinuses.

In the roentgenologic study of the maxillary cavity several workers have experimented with the opaque injection, using iodized oil for the purpose. R. H. Fraser reports (J. Michigan State Med. Soc., 25:271, June, 1926) on the methods developed in the course of injection of 35 maxillary sinuses, this number not including the cases which had previously been treated surgically. He believes that the results show that this procedure meets several practical clinical needs in a decisive way. First of all, it is safe. The iodine is in complete chemical union with the oil of poppy seeds and all its properties are masked. It is injected after the diagnostic irrigation and even if it is not promptly evacuated it does not exert any harmful ef-

fects. As an incomplete filling is incapable of detailed interpretation, no limit should be placed on the quantity of the medium used. In 10 of the cases more than 10 c.c. was required. A 20 c.c. syringe serves to supply a mixture of iodized oil (1 part) and liquid petrolatum (2 parts). It is of importance to keep the head in the lateral position until all films are made. When a penetration is desirable that produces some detail within the shadow cast by the oil, the oil is diluted 1:3. Except where there are abnormalities in the region of the os maxillaris, the sinus frees itself spontaneously in a few minutes. The use of petrolatum with the oil may delay the emptying and necessitate an irrigation adapted to its removal.

After more or less detailed comment on the illustrations accompanying his case reports, the author observes that the opaque injection supplements, on the one hand, the diagnostic irrigation and, on the other, the roentgenogram. Knowledge of the persisting filling defects is immediately useful in chronic hyperplastic sinusitis. In the acute cases of disease mural findings might be appreciated if it was known how to apply them. The results obtained in this series indicate, in the author's opinion, that: (1) one may demonstrate that an antrum is without abnormality; (2) in acute inflammation one may throw light on the type of pathologic process; (3) in more advanced cases one may obtain indications for surgical treatment, e.g. continuation of the irrigation; (4) in chronic hyperplastic cases one may show what must be accomplished in the operation; (5) invasion of the sinus by dental cysts of the maxilla and other pathologic processes may be disclosed. The normal sinus and one examined after a successful operation have no appreciable filling defect.

#### ROENTGEN DIAGNOSIS OF TOOTH INFECTIONS.

According to Thoma, (Boston M. & S. Jour., 194:768, April 29, 1926) the great variation in appearance of periapical tooth infection in the Roentgen picture furnishes opportunity for many differences in diagnosis and for diversity of opinions. A review, therefore, of certain phases of the pathology of these infections and how they cause changes that can be recognized by the Roentgen method may be found of practical value at this time.

The development of periapical infections depends on 2 principal factors: (1) The nature of the local injury; (2) the systemic defense factor. Until quite recently it was believed that the main factor governing the periapical lesions was the amount and character of the infection. The systemic defense factor has only recently received proper attention.

It should be kept in mind that the anatomic location of the abscess cavity has a great deal to do with the varying appearance in the Roentgen picture. The involvement and perforation of the cortex of the maxilla or mandible give a much more clearly outlined area on the film than results when the lesion is confined to the central part of the bone. The content of the abscess cavity has little influence on the radiability of the lesion; whether it contains a granuloma, pus or serum would not alter the picture greatly; it is the amount of the bone destruction that is shown.

The second type of patient is either without active defense against the infection, or the defense may have become impaired or lost on ac-



count of lowered resistance of the body. Besides the various debilitating diseases, age, habits, exposure, over or under nourishment, pregnancy, grief, worry, and fear have important bearing on this factor. In the second type there is only a very passive local reaction. A large granuloma is not formed and therefore there is no such walling off, no attempt to remove infected and necrotic tissue, and neutralizing of toxins as in the first group. Instead of extensive bone destruction and absorption of the tooth apex we are more likely to see proliferating changes caused by the irritating action of the bacterial toxins on the osteoblasts and cementoblasts, producing condensing osteitis and hypercementosis. The Roentgen picture, therefore, will only show very small bone defects and quite often increased density of the bone and enlargement of the apex of the root.

In regard to systemic effects from these dental foci we therefore now recognize that pulpless teeth which roentgenographically show but little evidence of bone destruction at the apex may be serious sources of disease in patients who are naturally susceptible or have an acquired susceptibility to streptococcic infection. In these cases, therefore, radical dental treatment is indicated. It is necessary to extract pulpless teeth even though they show only very slight changes of the periapical bone. On the other hand this is no argument for extraction of all root-filled and pulpless teeth regardless of local and general conditions.

A periapical condition, the meaning of which is often overlooked, is that caused by an infected pulp. The tooth generally shows no indication of treatment or filling in the root canal. Clinical examination is not satisfactory. Some dentists use an electrical vitality test to diagnose the condition of the pulp; if there is a reaction to the stimulus they pronounce the tooth "vital". This, however, only indicates proper functioning of the nerves in the pulp and in fact many such teeth, when sections are made, show chronic infection and abscess formation in the tissue. The Roentgen method will not directly demonstrate pulp infection but it will show indirect evidence, such as a causative factor (caries under filling, crown, etc.) or a resulting reaction in the periodontal membrane (infiltration of leukocytes and lymphocytes) with enlargement of the space between the root end and the bone. This condition should be carefully looked for when making a Roentgen study of the teeth. It appears as a crescent shaped area around the apex. A pulp which is diseased is often an active focus of infection, sometimes more important than a periapical infection and not infrequently the cause of obscure neuralgia or otalgia dentalis.

In concluding it should be pointed out that a Roentgen examination alone is not sufficient to make a diagnosis of dental conditions. The physical condition of the patient and his susceptibility to streptococcic infection should be recognized. A very careful study is required and every case must be individually considered. While an infected tooth is a menace to health, it should be remembered that the conservation of healthy, useful teeth for proper mastication of food is of great importance, especially to the sick. Teeth, therefore, should not be sacrificed through careless diagnosis, and when certain ones must be extracted proper reconstruction of the mouth by hygienic bridges or dentures should be planned.

## National Medical News.

### RESUME OF THE PROCEEDINGS ANNUAL CONVENTION OF THE AMERICAN MEDICAL ASSOCIATION,

Dallas, Texas, April 19-23, 1926.

(Continued from the September Journal)

#### ADDRESS OF THE SPEAKER OF THE HOUSE.

Dr. Warnshuis, in the course of his address opening the sessions of the House of Delegates, devoted considerable attention to the work of component societies, and as it amplifies that portion of the Secretary's report we quote the following sections:

"As an Association, as units forming our federation and as individuals, our professional and personal responsibility is divided into 2 general divisions: the pursuit of scientific study and research and the enhancing of our personal capabilities as physicians to apply these proved principles in the prevention and treatment of disease and, second, the education of the public as to the truths of scientific medicine.

"Our professional standing, our scientific advancement, the sifting of the real from the unproved rests with those who are associated with our universities, laboratories and hospitals. In those environments they are able to pursue research and study of the problems partly or still remaining unsolved and establish on a sound basis that which scientific research has uncovered. These workers command our respect for unfolding the erstwhile mysteries of physiologic and biologic functions and the pathobacteriologic changes resulting in disease conditions. As they unfold and establish principles and tenets, he who is engaged in general or special practice must exhibit their application. He can not remain 5 or 10 years in the rear of the march of scientific progress. He will, if he fails to devote sufficient time each month to acquiring this knowledge. In failing in this, he lowers the profession's standing, for we are appraised not always as a group but as individuals. It therefore devolves on state and county units to pursue vigilantly a program of scientific activity that will enable its members to remain abreast of scientific progress and reflect that progress in their daily contact with their patients. They guard against the mediocre, the obsolete, and bring up to standard the professional knowledge and work of their members. We lay ourselves open to justified criticism if organized medicine condones, by inactivity, the deficiencies and vagaries of its members. My earnest desire in this is for greater, well planned and concentrated instruction of members in order that they may receive sustained education abreast of the progress of our science. A higher, much to be desired standard and type of practice will then be evolved. This I hold to be an outstanding obligation of our county units—an obligation that is apparently neglected and to which state societies should devote thought and action.

"The second general division of associational responsibility is that of the educational enlightenment of the public as to what the science of medicine may and can achieve for man's individual and collective welfare. This is the greatest public contribution that we can make to all peoples. Our science has made wonderful strides.

We are able not only to prevent but also to cure many of the physical ills that beset mankind. We can extend the span of life and enhance it. But of what avail is this ability if we fail to disseminate this knowledge to the public? The public has evidenced and increasing eagerness to receive facts regarding scientific medicine from sources that are authoritative. Our federacy is that source and agency. Our responsibility is an outstanding one. The duty is ours to expend greater time and effort in imparting the knowledge. To do so, we must with concerted, well thought action disseminate these scientific facts and refute the vagaries and fallacies of those who have, and are holding forth as pseudoscientists or as cultists and scientists on theories and principles that rest on a factless premise. By the imparting of the knowledge that we hold, by setting forth that which has been proved, we render a dual service to humankind in conserving physical health, and relieving them of human ills and in exposing those who are posing as possessed of ability to treat disease by means and vagaries that are scientifically valueless. The purpose of your speaker in so expressing himself is to add emphasis anew to the importance of public education in scientific medicine, and to urge that this House take added action that will promote increased activity to that end."

#### ADDRESS OF PRESIDENT AND PRESIDENT-ELECT.

President Haggard made the "Periodic Health Examination" the *motif* of his administration and throughout his term of office traveled over a large part of the country preaching this doctrine wherever given the opportunity. It was natural that he should make it the principal theme of his Presidential Address. Concerning that subject, he said: "It is obvious that mere propaganda, while all important in the beginning of a great movement of this sort, can not realize its object unless it has as a basis a plan whereby every one in the profession can be brought to the acceptance and employment of the plan. It is clear that such a far reaching effort can not rest on a few men or on the officers alone of the various societies, but it must be put in the hands of the individual members.

"It would seem, therefore, that on the county society as a unit should be devolved the responsibility of giving every one of its members the information and the facilities, and further, through coöperation, to bring the matter to the attention of every individual in the community.

"To that end and to the practical utilization of the idea of periodic health examinations, the following plan has been elaborated by the retiring president as a suggestion in order to get the maximum number of patients examined by a maximum number of family physicians:

#### Plan for Promotion of Periodic Health Examinations.

"(1) The House of Delegates should recommend to the 34 states that have not yet acted, that the manual be obtained from headquarters at cost price, together with a suitable number of examination blanks, and supplied to each individual member.

"(2) The House of Delegates should recommend to the county societies that a special meeting on this subject be held at least once a year in order to popularize the plan and bring it into being.

"(3) A medical society clinic emphasizing the

need, value, method and technic in the conduct of health examinations, and their bearing on pre-clinical medicine, should be arranged by local or neighboring clinicians.

"(4) A strong, active committee in each county society on periodic health examinations should supervise the inauguration and perpetuation of the health examination.

"(5) A nation-wide educational campaign should be inaugurated during 'Health Week', or some designated period in coöperation with the existing board of health or with some local activity, such as the Anti-Tuberculosis Association, or other lay organization, to interest the civic clubs and other organizations in the great importance and benefit to be derived from this plan. Health parades with banners carried by Boy Scouts, films, large posters, and folders could be utilized, as was so successfully done by the Illinois Medical Society.

"(6) A statement in the nature of a circular letter should be prepared by the county society and sent impersonally as a statement from the county society to the clientele of the various members, calling their attention to the importance of the annual health examination and urging their acceptance of it at the hands of their physicians.

"(7) Many organizations, lodges, clubs, large industrial corporations, etc. could greatly facilitate the idea by having cards mailed to their various members on their birthdays, urging the importance of the acceptance of the birthday physical examination.

"(8) The medical society as such should start the campaign by having as many of the individual members as possible to undergo the examination; first, as an educational measure and, secondly, to imbue the individual members themselves with the importance and far reaching value of the plan. This method was employed by the Kings' County Medical Society. Nothing will stimulate the universal application as much as the profession themselves who so sorely need it, utilizing the idea for their own benefit as well as for the advancement of the general scheme.

"(9) The press should be requested to carry articles prepared and issued by the county society, preferably unsigned, as a news article or under the signature, if desirable, of the officers of the society, explaining the importance of periodic physical examinations and the benefit to be derived by the health client.

"These recommendations are to strengthen the work already done, crystalize it and have it activated by the House of Delegates.

"No more humane, scientific and socially and economically beneficent movement for the well being of the American people could be fostered and put into nation-wide practice than the universal periodic health examination by the American Medical Association."

President-Elect Phillips also selected public health and public education in medical matters as the basis of his discourse, and presented a masterful summary of our national efforts in that direction: "The United States, without having made any great pretense to the forcing of its scientific discoveries into the nationalistic program, has given to the world remarkable discoveries and scientific advances in medicine.

"The work of the Dicks, of Dochez, and Blake on scarlet fever seems to be established on a definite scientific basis. The discoveries made on the virtues and the relation of light to rickets represent another real achievement in the advance of science.

"The toxin-antitoxin prevention of diphtheria



has been definitely and positively proved. An intensive antidiphtheria campaign carried on in the city of Auburn, New York, has been so successful that no deaths from diphtheria have occurred in that city for the last 2 years. An antidiphtheria campaign now going on in New York State carries the slogan 'No diphtheria in New York State in 1930', and the state Commissioner of Health believes that this is possible. It would seem that the future holds out hope that diphtheria—the dread destroyer of child life—may ultimately disappear, at least as an epidemic disease.

"We may also claim a distinct advance in studies related particularly to the elimination of scarlet fever, measles, and possibly whooping cough. Moreover, the United States may truly be called 'teacher to the world' in organization and methods of preventive medicine.

"All these are distinct achievements in the advance of medical science, but in this country they have not been promoted in a nationalistic spirit. They have been offered freely to the world as our contribution. Let us not hesitate to do all in our power to give our own people the knowledge and the benefit of these discoveries. The public should know that children may be made immune from diphtheria as surely as from small-pox, and every physician should endeavor to persuade all patients to safeguard their children, especially those of preschool age, by the employment of preventive treatment.

"During the last few years, many of our leaders of medical thought, and particularly those clothed with the responsibility of outlining medical policies, have given serious consideration to the subject of public health education. There has been a slight awakening of the medical conscience as to the trusteeship of physicians as promoters of individual and community health. These pioneers have become alive to the fact that physicians only are qualified by heritage, by education and by experience to give to the public the basic principles of health preservation, and the protection of life that is afforded by sanitation and the scientific application of all the phases of preventive medicine. Given such responsibility, I ask you in all seriousness whether the medical profession of the country has ever lived up to its great opportunity to teach the people how to keep well. It sounds like a simple thing to do, but the reticence of medical men and the innate fear of publicity, the supposed restriction of ethical limitations, have tended to prevent these great educators from fully covering this proper field for a physician's activity.

"Nevertheless, there has gradually developed on the part of the public a demand for public health education. Gradually, great newspapers and newspaper syndicates are coming to realize that public health knowledge is a valuable commodity for which the people are willing to pay. This tendency is leading newspapers, magazines and newspaper syndicates to realize that the public must be given the true facts regarding individual and community health. This further knowledge in turn is showing its influence by the gradual elimination from these publications of the publicity which is sought by nostrums, cults, quackery and other menaces to the public health. This naturally engenders a desire to purvey only well founded information regarding health matters.

"In the quest for such information on the part of great publications, they have learned that organized medicine is the only possible source from which correct information can be obtained. Our

headquarters is well equipped to furnish every form of advice and counsel that any publication may need regarding irregularities and fakes. We are able from headquarters to supply health educational material covering a wide variety of topics, but we must not forget that 115,000,000 people in the United States need information and education both as individuals and as communities."

## REPORT OF JUDICIAL COUNCIL.

The Council's report dealt very largely with unethical coöperative projects and schemes for the solicitation of patients through so-called health or hospital associations, all of which came in for deserved denunciation, and one clause was given to consideration of an allied subject that has recently cropped up in various parts of the country in a new form.

"Because of many inquiries received, it has been thought necessary to define the term 'contract practice'. The following definition, arrived at after very thorough consideration and prolonged discussion, is presented for the consideration of the House of Delegates:

"By the term 'contract practice' as applied to medicine, is meant the carrying out of an agreement between a physician or group of physicians as principals or agents and a corporation, organization or individual, to furnish partial or full medical services to a group or class of individuals for a definite sum or for a fixed rate per capita."

In the House of Delegates, Dr. Dunn, of Nebraska, offered a series of resolutions bearing upon this question:

"Inasmuch as contract practice is absorbing an ever-increasing portion of general medical practice on account of the rapid development and concentration in business and industry, and inasmuch as brokers under the guise of health, accident and sickness insurance in which they purport as middlemen to sell medical services to the laity are entering the field of medical practice, be it

"Resolved, that: (1) The whole matter of contract practice be investigated under the direction of the Judicial Council.

"(2) The trend and dangers to patient and profession inherent in this movement be analyzed and clearly set forth.

"(3) Recommendations as to the policy of the American Medical Association toward contract practice, its functions, limitations and control be submitted to the House of Delegates for action at its annual session in 1927.

"(4) Systematic effort be made to get clearly before the constituent societies the results of this investigation and whatever action the House of Delegates may take in the matter."

These resolutions were adopted, together with one calling upon the Trustees to furnish the Council with such assistance as might be necessary for proper prosecution of this work.

## RESOLUTIONS ON EXPERT MEDICOLEGAL TESTIMONY.

In a supplementary report from the Committee on Legislation and Public Relations, the resolutions originally submitted by Dr. Follansbee, of Ohio, were presented in an amended form and were adopted by the House, as follows:

"Whereas, The present court procedure in expert opinion evidence in both civil and criminal

cases has in many instances brought public criticism and disgrace on both the legal and the medical professions; and

"Whereas, The present procedure in many cases is believed to defeat the administration of justice; and

"Whereas, An effort is being made in many states by the bar associations and medical societies of those states to correct such maladministration of justice, and to relieve the legal and medical professions of the public criticism now received; and

"Whereas, The American Bar Association is actively pursuing the above laudable effort; therefore be it

"Resolved, By the House of Delegates of the American Medical Association that it recognizes the urgent need for such remedial legislation and such change in court procedure as will correct the abuse of expert opinion evidence; approves the efforts of the various bar and medical associations; and further be it

"Resolved, That the House of Delegates endorses the principle that in civic and criminal cases the court may appoint expert medical witnesses, who shall be paid out of public funds, and who may furnish a written report; and that the American Medical Association offers its co-operation by such means as lie in its power to promote such legislation as will be mutually satisfactory to the medical and legal professions toward the correction of the present unsatisfactory procedure of presenting expert opinion evidence, and the Board of Trustees is hereby requested to use the facilities of this organization in such a way as to give effect to the sentiments expressed in this resolution.

"And further that the House of Delegates endorses certain principles approved by the Committee on Jurisprudence and Legal Reform of the American Bar Association, and by the American Institute of Criminal Law and Criminology as follows:

"That in civil and criminal cases where the issue of insanity is raised, expert medical witnesses may be appointed by the court, and paid from public funds, and that such witnesses may present a written report. Be it further

"Resolved, That a copy of this resolution be sent to the American Bar Association."

The Reference Committee on Legislation and Public Relations also reported favorably upon the resolutions presented by Dr. Southgate Leigh, of Virginia, and they were unanimously adopted:

#### Medical Legislation.

"Whereas, The strength of the medical profession in the field of legislation is lessened by lack of uniformity in policies and methods; and

"Whereas, Such uniformity can be promoted and established only through coöperation among the several state associations whereby each will have the benefit of the knowledge and experience of all others; and

"Whereas, Such coöperation can be best established through the Board of Trustees, acting through the Bureau of Legal Medicine and Legislation; be it

"Resolved, That every state association be urged to coöperate to the fullest possible extent with the Board of Trustees in all matters of legislation, state and national; and be it further

"Resolved, That the Board of Trustees be requested to extend to every state association all such assistance as may be possible in defining and carrying into effect its legislative policies, and in promoting uniformity in them."

## Communications.

### A PERMANENT HOME FOR STATE SOCIETY.

(A letter from Charles D. Bennett, M.D.)

Among the valuable suggestions by President Donohoe in his Presidential address, that referring to a Permanent Home for the society is of especial interest. At first thought, such a home seemed eminently desirable and yet comparatively few state societies have made such arrangements and one naturally asks why have they not done so. Lack of money does not seem to be the objection, as various local societies have made large expenditures for such purposes, notably the Academy of Medicine of Northern New Jersey and the William Pierson Memorial Library in Orange, and many similar enterprises in other states have shown ample financial capacity. More probable is it that the ages-long habit of personal and independent work of the average physician has kept him from uniting with others in such propositions, and it is only in comparatively recent years that the enlarging hospital staffs and the formation of group clinics have shown him the value of coöperation and mutual assistance.

We have, however, still far to go. Note the meagre attendance of physicians at our last Annual Meeting, 355 out of a membership of about 2300, and of these very few remained for the whole session. Is the apparent lack of interest partly because the society is homeless?

We might consider the proposition under several headings: First, Is it desirable to have such a home or headquarters? Second, Where should it be located? Third, How should the arrangement be carried out and financed?

To the writer's mind, a central home for the society has a very attractive sound. As at present constituted, and except for the Permanent Delegates on whose very existence, an attack is now under way, the State Society is practically constituted by committees or delegations sent annually from the component societies. These delegates change constantly and often they are strangers to each other, but probably 4/5 of the component society members remain at home and many such members never attend an Annual Meeting. Because of this the actual control of the society is in the hands of a very small group of men. All honor to these men who have carried the burdens so long and so well, but the writer feels that the present, rather languid interest of the profession would be much increased by more frequent contacts with other medical men from all over the state.

If we had a central home, open to all our members at all hours of the day, there would be almost necessarily a greater intercourse and a wider acquaintance and exchange of ideas between our now widely separated members.

To be really desirable, what should such a home include? Of course, a library where our archives and accumulated literature might be systematically stored and at the same time, be accessible to all. There should be an auditorium where large meetings could be held and also smaller rooms where local societies or committees could be accommodated. There might also be some simple laboratory arrangement for emergency tests, also perhaps a photographic room for camera faddists, also lounging rooms where the members or their families could meet socially and so establish firmer bonds of friendship.



For the younger set, if space permitted, there might be tennis courts, etc. This sounds a bit like a Medical Club. Well, why not? To have the physicians of the state feel that they own something tangible which they could see and could use, where they could expect to meet informally others of their profession and become better acquainted, break down exclusive walls which have apparently, although unintentionally, been built around our County Lines, would be of inestimable advantage.

Medical men and women all have the social instincts of other humans, yet how common it is to have a physician say, "we rarely meet the doctors outside of our own county".

Perhaps the greatest charm of attending an Annual Meeting is the renewing of friendship with men whom often we do not see again until at the next meeting. A central and permanent home would help this trouble.

Out of such a scheme might also in some future time, develop and materialize one of the writer's dream castles, that of providing a home, preferably suburban, for elderly physicians, and if possible, also for their life partners. He has the feeling that National Homes are too wide and cold and lacking in neighborhood friendship to be really attractive and home-like for those of us who have passed our working productive time, and he still leans to the idea of smaller and more familiar accommodations. But this is another story.

Consideration of our second heading at once brings up a broad discussion. Probably the first and greatest objection to such a home would be that the busy practitioner would have no time to visit a distant location and the benefits of such a place could be enjoyed to any extent only by those in the immediate neighborhood.

Of course, there is some truth in this, yet the Academy of Medicine in Newark holds its large membership from all over Northern New Jersey and its meetings are well attended by out of town men. This problem is the reverse of placing, say, a pest house, which everyone would like to see in some other neighborhood than his own, and everyone would probably like our prospective home to be in his proximity.

Atlantic City might say, here is the place, delightful to visit, popular with all, accommodations for everyone and the Annual Meetings would then also be held at the central house.

Trenton might say, here is the State's Capital and here also in this central and accessible location should be the State Society's Home.

Geographically at the very center of the state, New Brunswick might make claim for consideration.

However, it would seem preferable that the geographical center should give way to the center of population, and this of course would lie in or near Newark, the counties immediately around Essex numbering nearly two thirds of the Society membership. Moreover, the writer ventures to suggest that very possibly some working arrangement might be effected with the Academy of Medicine which now has a valuable building with large auditorium and has several smaller available rooms and also the nucleus of a library.

Such arrangements have been made in other states and in so doing a large expense might be saved and the burden of "carrying on" be distributed among a very large group.

Why, for instance, build a second auditorium, when one is ready and available? Why start another library when one is already working?

Of course such accommodations could only be effected after careful negotiation and a willing consent from both parties involved, but if union is possible, it would seem that the problem of a future home was at once made eminently feasible and attractive.

Financing such a proposition presents no insuperable obstacle. If only offices and the occasional use of the auditorium were desired, such expense might probably be met by a moderate increase in the annual dues.

If, however, the larger plan was adopted, the necessary funds could be obtained by the issue of mortgage bonds in denominations of \$100, \$500 and \$1000, and these should carry also a Sinking Fund by which the debt might gradually be extinguished.

Moreover, such an established enterprise, with a considerable actual investment and the promise of permanency, might well attract the attention of wealthy friends, and thereby gain by donations or legacies, much additional financial support.

If this scheme seems too elaborate, simpler arrangements can be made whereby the State Society could have offices at the academy, much as has been done in New York. This would at least be a first step in the right direction.

The writer submits these suggestions in all modesty, and really with the purpose of opening a discussion and bringing the matter generally before the profession. He is not wedded to this plan, and if a better one can be produced, will gladly welcome it.

### DISASTER RELIEF.

(The following letter from one of our members in Dover was received by the editor in response to an inquiry as to how the profession responded to the S. O. S. from Lake Denmark; the author modestly requested that his signature be withheld from publication.)

"Our experience with the recent disaster at Lake Denmark leads me to believe that the A.M.A. plan to organize the medical profession for disaster relief, basing the organization upon County Society relief corps, for action in such emergencies is sound. In this particular instance medical attention was of slight importance, since few of the patients were severely injured and as they came in slowly the situation was easy to handle. Physicians came from all sections of the state, offering their services, and they continued to come until 3 or 4 a. m. Sunday, by which time the work had all been finished.

"Our real problem was that of finding suitable accommodations and in the early hours, before we knew how extensive the disaster might prove, it was guess work as to how many beds would be required. We at once doubled the bed capacity of the Dover Hospital and when these beds were nearly all filled proceeded to open, an emergency hospital at the Elks' Club, where we placed about forty cots in the Lodge Hall and dining room. This made an almost ideal emergency hospital because the Elks had an excellent kitchen and dining service and this was given over to the nurses and patients. In addition to these facilities, we were offered free use of the American Legion headquarters, and found it possible to care for many injured and homeless refugees in these rooms.

"Referring to your inquiry as to the response of physicians and nurses, let me say that it was most gratifying. Physicians came from Jersey

City, Newark, Paterson, the Oranges, Montclair, Plainfield, Morristown, Summit, Greystone Park, in fact from every community within a radius of 40 miles, and I regret now that we did not register them. Ambulances arrived from Greystone Park, Morristown, Elizabeth, Newark, Paterson and Brooklyn. The medical men who came were ready and willing to do anything and several of those earliest on the scene were soon engaged in duties ordinarily performed by nurses or orderlies; indeed, one very prominent Paterson surgeon held a cylinder while I gave an intravenous saline injection to a marine in severe shock. The spirit manifested by these men was of the finest; they had come to render service and were willing to perform any required service, no matter how menial or how apparently trivial.

"The nursing, too, was well cared for, as nurses had come from the same towns that supplied physicians and surgeons, and the Orange chapter of the Red Cross developed the situation at the Elks' Club in a very efficient manner.

"The hospitals in this vicinity sent word that they were prepared to furnish supplies and any further assistance that might be necessary. Our local institution increased its bed capacity from 23 to 48. More than 100 patients passed through this hospital Saturday night, received attention and were prepared for transfer by ambulance to the Brooklyn Navy Yard. Our nursing staff had been on duty all day Saturday but continued to work straight through until Sunday night, assisted by nurses sent in by the Red Cross.

"Colonel Keefer, surgeon of the Second Corps Area, Governor's Island, made a survey of the situation about 2 a. m. Sunday and commended the Dover Hospital, the Emergency Hospital and the entire personnel for the manner in which the situation had been handled. Every patient had received antitetanus serum, had his wounds dressed, and all "paper work" compiled when the army and navy medical officers arrived. Mr. Buchanan, Assistant Director, American Red Cross, stated that he had never seen an emergency where injured persons and refugees received attention as quickly and as satisfactorily as that given by the citizens and the medical profession in this instance.

"The ready response of nurses and physicians to this call for aid was wonderful and I must say it made one feel proud of association with the profession. Our one regret was that so many were allowed to come from distant points long after the emergency had passed and the work was finished; but their spirit was of the right sort and they deserve as much commendation as those who arrived sooner on the field.

"Had the proposed plan for disaster relief been in operation at this time, we could not have received any better service, medical and nursing, than was rendered, but a central point of information and a responsible head to direct the work and control the situation would have prevented a good deal of useless inconvenience to those whose services could not be used.

"One of the first victims of the explosion was Commander Brown, Post Surgeon of the Naval Depot. At the first alarm of fire he accompanied Captain Clark, of the Marines, to answer the fire call and when within 100 feet of the burning building met instantaneous death in the first explosion. Dr. Brown was a young man, well equipped for his work, and during his service in this post he had made many friends, particularly among the medical men who held him in high esteem."

## Current Events.

### MEDICAL RELIEF IN DISASTER.

At the Dallas meeting of the American Medical Association, the Trustees included in their report a reference to the plans under consideration for organizing the medical profession in preparation for disaster emergencies arising anywhere in the United States. Their endorsement reads as follows:

"At the Atlantic City Session, Dr. William Allen Pusey, the Vice-President, submitted to the House of Delegates a recommendation to the effect that a committee be appointed to devise a plan whereby the Association, through its component and constituent units, might coöperate with the American Red Cross or other official agencies in providing medical relief in times of disaster. This matter was referred to the Board of Trustees, and the gentlemen whose names are signed to the appended report were appointed a committee to present a plan of organization for the purposes indicated. The Board endorses this report which provides for coöperation through the American Medical Association, the state medical association, and the county society."

The complete report of the Special Committee is reprinted here because our recent experience with the Lake Denmark disaster illustrates forcibly to New Jersey physicians the importance of these plans:

#### Report of Committee On Disaster Relief.

"This is an outline of a plan for immediate medical relief, by the American Medical Association in cases of disaster.

The reason for suggesting this is the confusion and often breakdown that occurs immediately after any large disaster, before the established state and national organizations which properly take charge of such situations arrive on the scene. This immediate difficulty is due largely to the fact that, except in the larger centers, there is apt to be no organization or individual with any authority for taking charge of these situations and directing the immediate work of medical relief. The suggestion of this plan has been made by medical officers of disaster relief of the American Red Cross with the hope that through it these immediate difficulties can be overcome and that coöperation with the Red Cross can be made more effective.

The purpose of the suggested organization is to provide an organization that can immediately function in the case of disaster by reason of its having a medical man designated in each county of the country who shall be deputized by the American Medical Association to act at once in organizing and directing immediate medical relief. He is to assume direction of medical relief until the properly constituted authorities or other recognized state or national organizations arrive and assume charge. It is not intended that this organization shall take permanent charge or that it shall take over the functions of the bodies provided by the state and federal governments, including the Red Cross. The function of this organization is primarily to furnish immediate medical relief in the interval before the usual organizations arrive. After their arrival, this organization is expected to put itself under their direction or control or cease to function, except in the unlooked for situation where the organizations properly looked to so fail to meet their obligations that independent action is necessary



to prevent suffering. It is to be hoped, and it is our expectation, that this organization will be able to coöperate both before and after their arrival with the state and federal organizations for relief, and with the Red Cross.

It is not the function of this organization to take charge of railroad disasters or of any other sort of industrial disasters where the corporation involved has its own organization to act immediately in these disasters. The function of this organization, in short, is not to take over medical relief in situations in which organized machinery to take care immediately of disasters already exists. The purpose of this organization is to provide systematic direction for relief only in those situations in which, for the time being, no adequate organization exists for performing this function.

The plan particularly has in mind disasters of such magnitude that they temporarily break down the ordinary machinery of the community for medical relief and call for the sudden mobilization of the medical profession of the community in order to cope with unexpected situations. The necessity for this may arise in a city as well as a small community.

The essential thing in such a plan is that there should exist potential machinery that can immediately be called on to act in the event of disaster. Disasters such as would call on this organization are fortunately so rare that any special organization that existed for this purpose alone would be very difficult to keep alive because of lack of demand for its services. It would seem, therefore, that the best plan would be to attach this function of disaster relief in each community to one of the regular officers of the constituent societies of the state medical associations. The officers on whom it would seem best to put this responsibility are the presidents of the local societies. They are representative men in their towns and counties, are chosen heads of the profession and, in the nature of things, have its confidence.

The plan, then, would be that the American Medical Association should direct that immediate supervision of disaster relief, until taken over by the proper organizations, should be a function of its officers as follows:

In counties: the president of the county medical society, where more than one county is represented in a single medical society, the director of disaster relief should be the president of this society.

The state director of disaster relief should be the president of the state society.

The national representative of the American Medical Association for disaster relief, it would seem, should be some one who is in the headquarters of the American Medical Association and, who, therefore, could always be reached promptly. And it would seem that the proper officer to represent the Association as director of disaster relief should be the general manager or secretary of the Association, who should act, as far as possible, with the aid and advice of the President of the Association.

The functions of the county or local director of disaster relief would be to assume charge—as captain—in systematizing, directing and controlling activities in immediate medical relief. He should feel that he is responsible for the direction not only of the local members of the profession but also of volunteers who come in. The great difficulty in these situations is that no one under present conditions feels that he can with propriety assume direction. Under this

plan the president of the county medical society not only could with propriety assume direction but should be expected to do so by the members of the profession.

The president of the county or district society should be allowed, if he wishes, to deputize the direction of relief to another member of the profession of his choice. If he does this it should be done formally and publicly, and this act should give his deputy full authority to act in his place.

The functions of the president of the state medical society as state director of disaster relief should be to see that the presidents of the county societies live up to their responsibilities, to coöperate with them in every way possible, and to act as a central officer through whom, in necessity, the national director of disaster relief or any outside organization could take up matters, particularly matters that they desired to bring to the notice of the members of the profession as a whole.

The national director of disaster relief should have functions similar to those of the state directors of disaster relief for the country as a whole.

The Secretary or the General Manager of the Association as national director of disaster relief and the presidents of the state societies as state directors of disaster relief should be liaison officers between the national headquarters of the Association, state headquarters and the component county societies.

An immediate function of theirs, in case this plan is adopted, would be to see to it that the presidents of the local societies and the profession of the country become acquainted with this plan of organization for disaster relief, and that in the event of disaster the president of the local society is to be looked to as the director in charge of medical relief until the proper authorities appear to take control.

This information should not only be given on the adoption of the plan, but should be repeated from time to time, until the public come naturally to expect the president of the county medical society to take immediate charge and to expect the medical profession to act under his direction as long as the immediate necessity exists. To this end, information of this plan should be promulgated repeatedly through *The Journal of the American Medical Association*, through the *American Medical Association Bulletin*, through the state medical journals and societies, and by such other means as may be effective.

William Allen Pusey.

W. D. Haggard.

Wendell C. Phillips."

#### Adoption by House of Delegates.

At the final business session, Thursday, April 22, a supplementary report was presented from the Committee on Reports, and from this we abstract the following paragraph, recommending adoption of the relief plans, which recommendation was later unanimously adopted:

"On representation made by the aforesaid committee, it is recommended that the designation of this plan be changed from 'Disaster Relief' to 'Medical Relief in Disaster'. This is an important matter, and the plan has evidently been carefully worked out. It is provided that the general manager of the American Medical Association shall be the national director of medical relief to any large disaster, and the presidents of state societies shall be liaison officers between the national headquarters of the Association, state headquarters and component county

societies. Presidents of district and component county societies shall be local directors, but may deputize other members of the profession to serve in their stead. It might be well to alter the plan set out by the committee so as to permit also the executive secretaries of state medical associations instead of the presidents, at the option of the national director of medical relief in disaster, to serve as state directors."

### THE STATUS OF SCHICK TESTING IN NEW JERSEY.

Henry B. Costill, M. D., Director New Jersey State Department of Health.

Annual reports to the State Department of Health are required of all local health departments. One question in a recent report was concerned with Schick tests and the number made by the local board. One health official in completing the report gave the astounding answer in regard to Schick testing; "Yes; the Red Cross nurse examines the children's eyes each year." Recently a physician wrote the Department as follows: "Can you give me any information about the present status of the Schick serum to prevent diphtheria?" These are not exceptional; they illustrate the confusion in the minds of many health officials and physicians in regard to the prevention of diphtheria.

A hundred children in the elementary school grades will die of diphtheria during the coming school year if steps are not taken to prevent this. The State Department of Health is doing all it can to stimulate and assist in the work in small municipalities, but only a negligible proportion of the quarter million elementary school children in the state will be protected unless an intensive program is begun. One of the essentials to success is a general understanding of the procedure by the public. Practicing physicians and health officials alike should miss no opportunities to inform persons of the value and limitations of protective measures against diphtheria. Every intelligent person should know that:

(1) The Schick test is a method of determining—by means of the injection of a minute amount of test material into the skin—whether or not a person is immune to diphtheria.

(2) Persons who give no reaction to the test are immune and will not contract typical diphtheria. Immune persons may occasionally develop a diphtheritic sore throat which usually will be harmless to them but may be dangerous to others.

(3) Persons found by the Schick test to be susceptible to diphtheria can be protected against the disease by the injection of 3 small doses of toxin-antitoxin mixture at intervals of a week; 80% of the susceptible people treated are permanently protected by this procedure; the other 20% are found by subsequent Schick tests to be not completely immunized and in need of further treatment. An additional series of 3 injections gives complete immunity in practically every case.

(4) Persons exposed to diphtheria or who have contracted it are protected by the injection of large doses of antitoxin. This gives immediate protection, but the immunity is not lasting. Toxin-antitoxin mixture, on the other hand, develops protective powers slowly, but the immunization once gained is, we believe, permanent.

The facts set forth are by no means commonly known. The State Department asks the support of the physicians of the state in the spread of this information.

## County Society Reports.

### ATLANTIC COUNTY.

#### ATLANTIC CITY HOSPITAL STAFF.

Joseph H. Marcus, M.D., Reporter.

The regular monthly meeting of the Atlantic City Hospital Staff was held at the Nurses' Home, 25 South Michigan Avenue, on the evening of September 17, 1926. Dr. Richard Bew, president, called the meeting to order. The minutes of the previous meeting were read and accepted as such. Following the reports of the various committees, the secretary read a letter from Dr. Schwarzcopf, in which he asked for the courtesy of performing operations of the eye in the operating rooms of the Atlantic City Hospital.

Following a discussion by various members of the staff, Dr. Richard Bew appointed a committee consisting of Drs. H. L. Harley and A. Pilkington, who were to investigate Dr. Schwarzcopf's credentials.

The secretary read a letter from Dr. Malamadson in which he applied for a position on the staff as assistant to the chief of the department, Dr. B. B. Filer. Dr. Filer recommended Dr. Malamadson, the applicant, in a very laudable manner.

It was moved and properly seconded that action on his application be held in abeyance until the annual meeting, at which new appointments are made to the hospital staff.

Dr. Walt P. Conaway was appointed as a special committee to interview Mrs. Harrison Cook, regarding the purchase of radium to be used in the Atlantic City Hospital.

The scientific program was presented by Drs. Richard Bew and Samuel L. Salasin, who in an informal manner discussed their medical service covering a period extending from May to July, 1926, inclusive.

A more detailed presentation will be forthcoming at a meeting in the near future. In this general discussion of the medical service one of the important points emphasized by Drs. Bew and Salasin was the value of the Widal test as an aid in the diagnosis of typhoid fever, relying mainly upon clinical manifestations rather than entertaining a most significant attitude relative to the Widal for positive diagnosis; however, constantly bearing in mind the highly significant value of this laboratory procedure. The general subject of typhoid fever was then discussed in a most comprehensive manner by Drs. Davidson, Earbash, Salasin and Taggart, all basing their observations and conclusions on their personal experience in the treatment of typhoid fever these past few years.

Dr. Richard Bew appointed a committee consisting of Drs. Barbash, Andrew and Davidson, who were to draw up a resolution to be sent to Drs. Philip Marvel, Sr., and Junior, the message to express in appropriate manner the profound sympathy entertained by the Atlantic City Hospital Staff, in the untimely death of Mrs. Philip Marvel, Sr.

The members present were: Doctors Bew, Conaway, Barbash, Davidson, Harley, Filer, Charlton, Pilkington, Uzzell, Andrews, Taggart, Ireland, Subin, McGeehan, Winn, Walker, Sumner, Rosenberg, Matheson, Cheeves, Hyman, White and George.



**BERGEN COUNTY.**

H. B. Wolowitz, M.D., Reporter.

The regular September meeting of the Bergen County Medical Society was held at the Hackensack Hospital, Hackensack, on September 14, the president, Dr. M. J. Sullivan, presiding. This being the first meeting following the summer recess, it was purely a business meeting.

The applications for membership of Dr. David Goldberg, of Westwood, and Dr. W. C. Williams, of Rutherford, having been approved by the Membership Committee, were voted upon and accepted.

An application for membership was received from Dr. Spencer T. Snedecor, of Hackensack, and was referred to the Membership Committee.

The Entertainment Committee was authorized to plan a get-together dinner with all the fringes for the very near future.

A communication from the State Society relative to public health education was read and ordered turned over to the Scientific Committee.

A committee was appointed to draw resolutions on the recent death of Dr. Beveridge.

A committee was appointed to seek another meeting place, it having first been found desirable to make a change.

The group accident and health insurance policy offered through the State Society was discussed. One member stated that he held a similar policy which was as good or better and which cost but a few dollars more. Another point made was that the policy was interesting to the older men but was much too expensive for the younger. No action was taken since it was decided that the matter was a personal one for each individual.

**GLOUCESTER COUNTY.**

Henry B. Diverty, M.D., Reporter.

Members of the Gloucester County Medical Society held their annual meeting at the Woodbury Country Club, about sixty physicians, accompanied by their wives, enjoying the banquet and entertainment.

Dr. Wilson Stout, of Wenonah, president of the society, presided at the affair, which was one of the most successful ever held by the association.

Mrs. Miriam Lippincott entertained with dramatic presentations following the dinner. "Pol-dican", given by Mrs. Lippincott, was highly appreciated by the members.

**MIDDLESEX COUNTY.**

John H. Rowland, M.D., Secretary.

The regular quarterly meeting of the Middlesex County Medical Society was held in the Alumni House, Queens Campus, Rutgers University, New Brunswick, on September 15, 1926, at 4 p. m.

The meeting was called to order by the president, Dr. J. P. Schureman. The minutes of the previous meeting were read and accepted.

The Program Committee reported that program for the remainder of the year was almost completed.

The Membership Committee reported that the following applicants were approved: Dr. Anthony Lanelli, Perth Amboy; Dr. S. Greenberg, New Brunswick; and Dr. L. A. M. Leher, New Brunswick. These men were elected members.

The communication on Medical Relief in Disaster was read and accepted.

The speakers of the afternoon were as follows:

Dr. F. Metzger, Dean of Rutgers University, who appealed to the physicians for help in examining 350 freshmen at Rutgers; Dr. Pinneo, who discussed the advantages and purposes of the Life and Health Insurance; Dr. Edward Rose, of the University Hospital, Philadelphia, who gave a very thorough paper on the medical aspects of goiter; he was followed by Dr. Frederick Bothe, of the Presbyterian Hospital, who brought out the surgical side of goiter.

The discussion was opened by Dr. Clarke, of New Brunswick. After free discussion the meeting adjourned.

About 35 members and guests were present. This was a fair response in attendance considering the interest in the golf tournament held at Short Hills.

**MORRIS COUNTY.**

Marcus A. Curry, M.D., Reporter.

The annual meeting of the Morris County Medical Society was held on the evening of Tuesday, September 21, at The New Jersey State Hospital at Greystone Park; the facilities of the institution for the meeting having been tendered by the Board of Managers and Superintendent Dr. Curry, in continuation of the annual custom that has prevailed for many years.

President Glazebrook presided over a good attendance of members and several of the hospital medical staff were present as guests.

The usual routine business was handled with dispatch and incidentally Treasurer Reed expressed gratification that all members were paid up and had been paid up for many months; also calling attention to the fact that the dues for next year would be \$15 payable at this time in advance.

Secretary Lathrope spoke on the importance of the members filling out the reply cards that accompany the notices of meetings which about two-thirds of the members failed to do; that it is a great help if these reply cards come in promptly so those in charge of the meeting can be notified of how many to expect; that it is quite as important to say "no" if one is not going to attend as to say "yes" if one is coming to the meeting.

Secretary Lathrope spoke also of the desire of the Executive Committee to have better records of our members; that a card index is to be gotten up and sometime in the near future this will be done and cards will be sent to be filled out by the members; and asking that they be given prompt attention and returned promptly; that it is very essential to have this sort of record and asking coöperation when the time comes.

Group Insurance, which has been arranged for by the State Society, was discussed by President Glazebrook who urged the members to act without further delay in accordance with the notices received by them; as if the opportunity is to be availed of, at least 75% of the members of the State Society must come into the group. Dr. Pinneo of Newark took up the subject and went into the proposition in a detailed way as to how the opportunity was made possible and just what it means to the individual member in the way of obtaining benefits not heretofore vouchsafed to them through the State Society. Information on points raised by members was freely and lucidly given by Dr. Pinneo. Dr. Pinneo also stressed the limitation of time within which this special dispensation of the insur-

ance company might be availed of, urging that applications be sent in without delay as time is important lest the opportunity for the members to benefit themselves individually be lost.

Dr. Costello as a delegate to the State Society annual meeting made a highly favorable report on matters of general interest and on incidents more intimately related to the county society and its purposes; all the society's annual delegates were present as were many of the permanent delegates; favorable regard for Morris County was indicated; and while the matter of a change in the election of trustees of the State Society had been postponed for a year the Morris County plan seemed to find more favor than any other advanced.

Dr. Costello called attention to the ruling of the Motor Vehicle Department which provides for a special insignia of "M. D." for automobiles of physicians; that Commissioner Dill is anxious for the physicians to send in and get this insignia and take off all other insignias; send in the license number and a card and this insignia will be sent.

Dr. Curry spoke on the dinner which was given by Dr. Donohoe to secretaries and reporters of the county societies, at Atlantic City; that at that time Dr. Morrison talked very strenuously to the secretaries and Dr. Reik talked to the reporters; that Dr. Reik brought up one thing that should be brought before the society, which is that frequently in the various counties something happens of importance that the reporter didn't get hold of and didn't get into the State Journal; that it frequently happens in this county that something occurs that the reporter doesn't know about and doesn't get into the State Journal; that if the various members will let the reporter know of anything of importance in the county, he will do his best to get it into the Journal.

There were two proposals for membership; Dr. Robert L. Gilbertson of Madison, and Dr. Walter L. Tanner of Morristown; the applications taking the usual course.

This being the annual meeting the meeting proceeded with the election of officers for the ensuing year.

The recommendations of the Nominating Committee which were made at the June meeting were read by President Glazebrook. There were no other nominations made and the following officers were unanimously elected:

President Clarence A. Plume, Succasunna; Vice-President, Samuel C. Haven, Morristown; Treasurer, F. Grendon Reed, Morristown; Secretary, George H. Lathrope, Morristown; Reporter, Marcus A. Curry, Greystone Park; Executive Committee (3 additional members) Francis H. Glazebrook, Morristown; William A. McMurtrie, Morristown; Ellery N. Peck, Boonton; Annual Delegates to 1927 State Meeting, William P. Costello, Dover; F. Irwin Krause, Chatham; L. E. Williams, Madison; Alternate Delegates, Edward Ackerman, Dover; Byron G. Sherman, Morristown; W. J. Summers, Boonton; Historian, H. W. Kice, Wharton.

President Glazebrook announced that he had received a communication from The Jerseyman, which as he understands it will celebrate the centennial of its birth sometime in October and in keeping with its program for a centennial issue wishes to get historic sketches of Morristown hospitals, the county medical society, etc., for publication; the matter of furnishing a sketch of the history of the county society was discussed

and by unanimous action of the members referred to the Executive Committee.

The time for the address of the retiring President having arrived, Dr. Glazebrook arose splendidly to the occasion. Prefatory to reading a highly interesting paper on "The Acute Abdomen" which was enthusiastically received by his audience and has been submitted for publication in the Journal, Dr. Glazebrook spoke on incidents of intimate interest to the county society during his incumbency, as follows:

"It seems proper to review briefly at this time the society's activities during the past year. I want first to express my appreciation to the Executive Committee for their loyal support and assistance in carrying on the work of the society during my term of office; certainly the society chose wisely in selecting the Executive Committee. I am sure you will agree that the business has been expeditiously and wisely executed. The year has been a most interesting and satisfactory one. The four regular meetings were well attended, and there was a fair turn out at our special meeting to hear a talk by Dr. James Cooper on the Birth Control situation. Dr. H. E. B. Pardee of New York City entertained us with a most able paper on 'Cardiac Disease' at the December meeting; the March meeting at which time a symposium was presented by the members of the society was one of the best meetings it has been my privilege to attend during my twenty-four years of membership. Dr. Reik, State Secretary, attended this meeting and thought well enough of the papers to give Morris County practically the entire scientific section of one edition of the State Journal; this was, indeed, most complimentary. Dr. Linsly Williams of the National Tuberculosis Association addressed us at our June meeting when we were the guests, as usual, of the Board of Directors of the Shongum Sanatorium.

"Outstanding in the way of constructive work, the meeting of the Executive Committee with the various Visiting Nurses' Associations of the county and the subsequent consideration and action of the society resulting in the standardization of the standing orders for these associations throughout the county, regulating the fees and arranging for regular examinations of the nurses, was a decided step forward. I would recommend such conferences annually to discuss the problems confronting these organizations. The Morris County plan of electing the Trustees of the State Society was favorably received throughout the State and will surely influence any final action in this connection. Morris County's activity concerning the question of Group Life Insurance was instrumental in bringing the question to the attention of the State Society, where, as you know, it was approved and is now in operation.

"Many public problems have been discussed; one of particular interest being the movement for a County Physician in place of our coroner system, which should be carried on until accomplished.

"In retiring, the message I would leave with you is to give your full support to the incoming President. You can best do this by regular attendance at the meetings during the coming year; remember these are your meetings. The President and the Executive Committee are doing their utmost to make the programs attractive and helpful and will be glad to have your counsel and discussion; and besides it does us all good to get together in a common interest; the better we know each other the more tolerant we are apt to be of the other fellow's point of view."



Retiring President Glazebrook was given a unanimous standing vote of thanks and appreciation for his address so ably rendered.

Superintendent Curry reviewed some of the history and work of the State Hospital at Greystone Park, stating that on August 17 of this year the institution had completed 50 years of service; that on August 17, 1876, the first patients were transferred to the Trenton Hospital and on August 17 of this year 2 of that original transfer still lived at this institution. Continuing Superintendent Curry said: "I really feel that the men do not take the interest in this institution that they really should; I know we have your good will and support but at the same time I really wish you would take a more active interest in this institution and see and know exactly what is being done at the institution, so that when some things come up frequently regarding the institution you will be in a position where you will know very definitely of the conduct of the institution at Greystone Park. As you know we are building quite rapidly and we expect and hope to have it so when you meet with us next year it will be in the new building which is being completed—a reception building for 250 patients;

where every patient coming to the institution will be admitted and there studied and then transferred from that particular building to the building where the patient is best fitted to go; and we are in hopes of running a clinic, similar to the out-clinics we are established, so we will be able to send a great many patients back home without ever becoming patients in the institution. We feel we are doing some very progressive work at the institution and we feel that we want your coöperation and want your aid."

Superintendent Curry invited the members and guests to supper prepared under the supervision of the recently appointed new Warden, Captain George J. Hamberger, during which the new officer was introduced. The supper was greatly enjoyed and not only sustained the reputation of the institution for entertainment of this character but as indicated by the comments, gained some added prestige.

Grand Annual Field Day for patients at the State Hospital was announced by Superintendent to be held on Saturday, October 9, at which there will be an exhibit of occupational therapy products, of the physical education department work, athletic events, etc., to attend which a cordial invitation was extended to all.

#### COUNTY SOCIETY GROWTH.

(Two Messages from the State Society Secretary)

The officers and members of the County Societies are to be warmly congratulated upon their activities during the past year. The increased interest and attendance at meetings are very manifest. We have listened to scientific papers this year which would have reflected credit upon any medical society in America.

New hospitals are being erected in many parts of the state. Physicians are pushing these building campaigns. In Bayonne the doctors subscribed over \$60,000 toward the erection of a new hospital. In Burlington the physicians have likewise contributed over \$22,000 for the same purpose. New members are being added to the hospital staffs, hospital standardization is being elevated and the character of service constantly improved. Reference is made particularly to the hospital work and activity in Atlantic, Bergen, Burlington and Union Counties.

A drive is being made all over the state to further control the ravages of tuberculosis, smallpox, diphtheria and scarlet fever. Active immunization against the development of the two latter diseases is being increasingly employed in many of the counties. Tetanus antitoxin is found in every hospital doing clinical and emergency work.

Our membership is constantly increasing. We have now enrolled 2310 members. In the Official Transactions published in 1923 the membership was placed at less than 2000. Let us set 3000 for our next goal. There are more practicing physicians than this in the state. We should make every endeavor to have them all enrolled. This year we have added more new members and have had more re-instatements than ever before. It is manifest that membership in the County and State Societies is being made well worth while.

We are returning from our summer vacations rested and refreshed. The fall months are the very best in the year for securing new members.

New York State Society has slightly over 60% of its total physicians enrolled. Pennsylvania has a little over 70%. Illinois 62% and Massachusetts 70%. Ours is slightly over 70%. I believe we lead the list. We should not rest on our oars until we have 90%, which is about what we may safely absorb with due consideration for professional and moral standards.

J. B. Morrison,  
Recording Secretary.

#### TO THE TREASURERS OF THE COUNTY MEDICAL SOCIETIES.

Will the Treasurers of the County Societies please remit to Dr. Marsh, Treasurer of the State Society, the names of all new members, accompanied with the proper remittances.

The American Medical Association is preparing the new 1926 Directory. Many new members are applying to the A. M. A. and to the Motor Vehicle Department of New Jersey for Automobile Emblems, only to be informed that they are not members of the Medical Society of New Jersey. These men also are not receiving their copies of the State Journal, and complaints are being made to the Publication Committee repeatedly on this account.

New members in the County Societies are not accorded membership in the State Society until their names are in my hands and their dues to the State Society have been forwarded to Dr. Marsh, our treasurer. It is a distinct injustice to delay the completion of these memberships in the State Society. It also creates a feeling of distrust in my office when my office is not to blame.

I earnestly urge your more active coöperation in this matter for the welfare of the State Society and in justice to new members.

Yours sincerely,  
J. B. Morrison,  
Recording Secretary.

## Marriage.

**HARVEY-COBB**—On September 7, 1926, at Mones, near Ditchfield, Conn., Dr. Thomas W. Harvey, Jr., of 273 Tremont Avenue, Orange, to Miss Helen H. Cobb of Harrison Street, East Orange.

## Death.

**MARVEL**, Mrs. Phillip, wife of Dr. Philip Marvel, died at her residence, 2901 Pacific Avenue, Atlantic City, at 6 o'clock, September 15, after an illness of several weeks. Mrs. Marvel was born in Philadelphia. She was the daughter of Thompson and Martha Irvin, who moved to Atlantic City in 1886. She is survived by her husband, two daughters, Mrs. John D. Boushall Jr. and Mrs. John C. Cooper Jr., a son, Dr. Philip Marvel Jr., and two sisters, Mrs. Elwood Bartlett and Mrs. Harry B. Cook.

## Personals.

Dr. and Mrs. R. W. Moister and family, De Forrest Avenue, Summit, have returned home from a vacation at New London, N. H.

Dr. H. H. Bowles of Woodland Avenue, Summit, has returned from his vacation spent at Bridgehampton, L. I. Mrs. Bowles and the children returned about two weeks later.

Dr. and Mrs. Watson B. Morris of Springfield have returned to town after passing the month of August at Moosehead Lake, Me.

Dr. and Mrs. W. T. Ramage of 232 Lafayette Street, Newark, returned from their summer home, 502 Woodland Avenue, Avon.

Dr. and Mrs. Albert Scott Harden of 540 Warren Street, Newark, and their sons, Albert Jr. and Bruce, are back from their summer home, Fair Haven, at Island Heights, where they have been since June.

Dr. and Mrs. Wells P. Eagleton of 212 Elwood Avenue, Newark, are at home again from Europe where they spent the summer in Italy and France.

Dr. and Mrs. Walter C. Richman of 165 Roseville Avenue, Newark, and their daughter, Miss Evelyn Richman, have returned after passing the season at Ogunquit, Me. They spent their last week visiting the White Mountains, Montreal, the Great Lakes and Rochester.

Dr. and Mrs. J. Bennett Morrison of 97 Halsey Street, Newark, have returned from Boothbay Harbor, Me.

Dr. and Mrs. L. G. Kirkman and family of 176 Roseville Avenue, Newark, have returned from their vacation at Manasquan.

Dr. and Mrs. Herbert Foster of 10 The Crescent, Montclair, have returned from abroad. They toured France, Germany, Switzerland and Denmark, and sailed from Copenhagen for home.

Dr. Charles Craster of Newark has returned on the S. S. Leviathan from England. He sailed with Mrs. Craster and their daughter Betty early in July. They spent most of the time in touring the British Isles. Mrs. Craster and Betty return about October 1. Dr. Craster has been named a member of the National Conference Board on Sanitation, which organization has just issued a bulletin, "What Price Smoke?" in its efforts to eliminate the smoke nuisance from New York and other cities. Among the other members of

the board are Dr. James J. Hagen, health officer of Jersey City, and Mrs. Rudolph Binder of East Orange.

Dr. and Mrs. Bernard H. Greenfield of 691 Clifton Avenue, Newark, have returned on the Belgenland after touring France, England, Switzerland and Italy.

To commemorate his twenty-fifth anniversary as a practising physician, Dr. Harry B. Slocum, chief of staff at Monmouth Memorial Hospital, recently gave a dinner at Price's Hotel, Pleasure Bay. Dr. William K. Campbell was toastmaster, and in behalf of the guests gave Dr. Slocum a wrist watch. The hospital staff attended.

Dr. Wellington Campbell of Old Short Hills Road, Short Hills, who has been spending the month of August in Waterford, Me., has returned.

Mrs. Henry G. Holler of 234 Montclair Avenue, Newark, and daughter, Miss Helen Holler, have returned from Lake Winnepesaukee, N. H., where they spent the summer, with the exception of a short stay in Williamsport, Pa. Dr. Holler has also returned after joining them for a month. Miss Holler will leave for Smith College September 27, to enter her junior year.

Week-end guests at the summer home of Saul A. Kaplan at Avon were treated by Dr. George F. Corrigan of Newark with stories of his personal experiences during a four-month trip through England, France, Germany and Austria.

Mr. and Mrs. Lawrence MacGinnis and their family of Toronto, who had been visiting Dr. and Mrs. Ambrose F. Dowd of 215 Mt. Prospect Avenue, Newark, are spending a week in Atlantic City. Later, accompanied by Mrs. Dowd, they will motor to Bretton Woods, N. H., where they will spend ten days at the Mount Washington Hotel. Dr. Dowd will join them in the mountains.

Dr. George G. Jackson of 14 Hill Street, Newark, has been making a two weeks' stay in Asbury Park.

Dr. and Mrs. J. L. Meeker of DeBary Place, Summit, have gone on a motor trip to Lake Sunapee, N. H., and the White Mountains.

Dr. and Mrs. Wm. H. Lawrence of 129 Summit Avenue, Summit, have been on a trip to Canada.

Dr. and Mrs. L. W. Bagg of Montclair and Newark have returned from Maskoma Lodge, N. H., where they have been since early in August. Miss Barbara Bagg, who spent the summer at Lochearn Camp, Lake Fairlee, Vt., motored back with them. Miss Bagg then left for Pleasant Point Club on Lake Ontario, remaining until after Labor Day.

Dr. and Mrs. J. T. Wrightson of 520 Clifton Avenue, Newark, have returned from Montreal and Lake Quimet in the Laurentian Mountains.

Dr. and Mrs. Herman C. H. Herold of 1115 Broad Street, Newark, and their daughters, the Misses Janet, Camilla and Katherine Herold, have been spending two weeks at Haines Falls.

Dr. and Mrs. E. D. Newman of 81 New Street, Newark, have returned from Kennebunkport, Me.

Dr. and Mrs. George Jenkinson Holmes of 437 Parker Street, Newark, returned from Edgartown, Mass., after Labor Day, accompanied by their daughter, Miss Mary Holmes. The latter and her mother have been away since the middle of July. Dr. Holmes joined them for the last month.

Dr. and Mrs. Herbert M. Ill of 788 Lake Street, Newark, have been spending a few days at the summer home at Island Heights of Dr. and Mrs. Carl H. Ill of 505 Clifton Avenue.



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## ESSENTIALS FOR A SUCCESSFUL PROSTATECTOMY.

A. HAINES LIPPINCOTT, M.D.,  
Camden, N. J.

The lowering of mortality rates in prostatic surgery is only one of the many surgical triumphs that the profession is proud to record. This to a great extent is due to the urologist who has step by step, not only improved the technic but has shown, more important than all, the necessity of proper preparation of the patient before and care following the operation.

These patients come under our care usually in the decline of life, tired out from a dysuria that has interfered with their rest both day and night, with impaired kidneys, broken down cardiovascular systems, and with chronic bronchitis and emphysema. Frequently they have been submitted to a prolonged unskilful and unsuccessful catheterization. They are bleeding and infected, and have often been under the strain of a chronic distention of the bladder for months. Quoting Dr. Young, "Many of these old men are veritable museums of pathology."

And so we are handed this human wreck to rehabilitate! The choice of approach to the prostate gland either by the perineal or suprapubic route, to my mind, does not matter. I feel that the type of operation, of itself, providing it is done with any degree of skill, is of secondary importance. There are, as we all know, certain types of glandu-

lar enlargements that should be removed by the perineal route, and if one has been so fortunate as to receive his urologic training under Young, he will no doubt do most of his prostatectomies after the method of this able teacher, but for the general run of surgeons I believe the suprapubic operation is the preferable one.

It is not my intent in this paper to deal with the operative procedure itself, but rather to confine myself to the preoperative and the postoperative treatment.

A successful catheterization at once takes the case out of the emergency class. Having a catheter comfortably fixed in the urethra we can bide our time. It has been shown that suddenly emptying the chronically distended bladder is a dangerous procedure. I have on more than one occasion witnessed fatalities follow; therefore, the bladder should be emptied by very slow stages, either by drawing off small quantities of urine at frequent intervals or by the decompression method as described by Bumpus. If, as is often the case, an indwelling catheter is not tolerated, a suprapubic drain should be inserted; this should be done under local anesthesia. A pezzet catheter makes a very comfortable and efficient drainage tube.

Having established good drainage we then begin a study of the case. This must be thorough and complete; the more we know about our patients the lower our mortality is bound to be. The association of an internist is of great help. The survey embraces many points: The renal function and

pathology; blood chemistry; condition of the cardiovascular system; extent of infection,—this includes the mouth and teeth; blood pressure; blood Wassermann; the past history and environments; condition of the gastro-intestinal tract and the nervous system; and, a careful examination of the lungs.

When the residual urine has been removed by either method mentioned above, and the patient's general condition has improved, it is well to gather all information possible as to the size and type of prostate with which we have to deal and the condition of the bladder itself, noting any complications such as stone, tumor, diverticulum or tabs.

If the approach to the gland is to be through the perineum, or if we decide upon a one-step suprapubic operation, a cystogram, or possibly a cystoscopy, should be made; but if the obstruction is to be removed by a two-stage suprapubic operation, the patient may be spared the discomfort and possible traumatism of a cystoscopy. A cystogram will usually reward us with valuable information, and its making is not attended with pain or discomfort.

If the patient is in the class of a fairly good risk, and is tolerant to the catheter, the preoperative treatment may be carried through with this drainage. On the other hand, if this drainage is bothersome, unsatisfactory and interrupted, a pezzet catheter of goodly caliber should be placed in the bladder suprapubically under local anesthesia. The importance of comfortable and effective drainage cannot be over emphasized; in my experience the suprapubic drainage has been more satisfactory than that by catheter. It has many points in its favor; it is not so apt to become occluded or dislodged; it is by far more comfortable to the patient, and with ordinary care it is cleaner. As we endeavor to get these old men to frequently shift their position in bed, to use a back rest, or get out of bed in a chair, with the suprapubic method there is not the danger of interrupting the drainage, as there is through the dislodgement of a catheter. If the preoperative care is

to be extended over a lengthy period, which is often the case, it is, in my opinion, the drainage of choice. I have seen patients pick up rapidly following the substitution of this for the catheter.

The importance of fluids from the beginning to the end of the case is recognized; every method of administration is taken advantage of to flush these old men with water; however, care should be taken not to overdo this. A record of the intake compared with the output should guide us as to the amount to be administered, but it should be pushed to the limit.

Taken for granted that we have a fairly clear idea of our patient's general physical condition, with the aid of our medical associates we proceed to get him in the very best condition possible for the ordeal of an operation. The time necessary for this varies in each individual case; the usual time is about 2 weeks; but I have had cases under treatment many weeks before they came to operation. I have sent them home with their suprapubic drainage for a stay, and had them return later and successfully go through the operation.

The kidney function, blood chemistry and Mosenthal reaction are frequently checked up, and we are guided largely by these findings as to the most favorable time for performing the operation. Digitalis is an important medication used in these cases practically the entire time the patient is in the hospital.

When the phthalein output is hovering around 40 or 50% or better, the blood urea, and creatinin is near normal, the specific gravity of the urine is not fixed or low, the tongue clean, the eye bright, the blood pressure not low, the gastro-intestinal tract functioning well and the patient tells us he is feeling fine, we feel that the time for operation is at hand.

Our operations are done under gas-oxygen anesthesia, and if there is rigidity to interfere with the enucleation of the gland, a few drams of ether will do no harm. I have had no experience with spinal anesthesia, but it would seem to me to have an important place in this work. It is our custom to



administer morphia and atropin before giving the anesthetic.

The operation over, hemorrhage controlled, the patient is wrapped in blankets and returned to his bed, and given a hypodermoclysis of normal salt solution. The drainage tube is connected up with a bottle attached to the side of bed and proctoclysis is begun and kept up for several days. The solution is of glucose and soda bicarb in normal saline solution; to the first quart I dram of tincture of digitalis is added; after this, digitalis is given hypodermically for a few days, and then by mouth.

The patient is encouraged to drink plentifully of water, and drinking of water is urged throughout the convalescence. If the tongue is clean and moist, fluids may be given by mouth exclusively. Pain and restlessness is controlled by morphia and atropin; the bladder is not irrigated until about the third day; every precaution is taken against hemorrhage and infection, as these old men easily succumb from the effect of these conditions. A gauze compress of acriflavine solution placed around the tube where it enters the bladder, at every redressing, both following the preliminary cystostomy and the prostatectomy, will tend to prevent infection of wound and bladder cavity. The drainage is removed in about a week. I do not use an indwelling catheter following the removal of the tube. The patient's dressings are frequently changed, and he can be kept fairly comfortable.

The employment of an intelligent nurse, especially one who has had experience in this class of cases, adds much to the chances of recovery. Hemorrhage, infection, uremia, failure of the heart and pneumonia are the chief causes of death following prostatectomy.

I am not in favor of rushing these cases. It is not wise to get them out of bed in less than a week, nor to permit them to sit up long at a time in the beginning of their convalescence, nor to return to their home for 3 or 4 weeks; the latter applies more particularly to the cases in the ward.

Following the operation there is a mark-

ed improvement in the patient's general health; it has been said the life expectancy has been extended 18 years.

In a minority of prostatectomized patients the symptoms persist; the most common of which are frequency, difficult urination, pyuria, retention, incontinence, and occasionally the fistula may not close.

A supervision of our cases after leaving the hospital, and measures directed to remove the cause of the above sequels will in most cases bring about satisfactory results.

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### UROGRAPHIC STUDIES OF VARIOUS TYPES OF CONGENITAL, RENAL AND URETERAL CONDITIONS.

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STANLEY ROGERS WOODRUFF, M.D.,  
Jersey City, N. J.

My reason for bringing this subject to the attention of such a meeting as this is the fact that it is usually presented only to special urologic societies, but as the conditions are those that the general practitioner, and particularly the surgeon, is liable to meet with at any time, it is well to be on one's guard and to have the subject at least in mind.

Prior to the last few years of distinctive advance in diagnostic urology—and the recognition by the profession of this advance—anomalous conditions of the kidney and ureter were discovered only at autopsy or on the operating table; the latter often with considerable dismay. The percentage of preoperative diagnosis since the advent of safe and unirritating pyelographic media will continue to increase every year up to as near perfection as is possible.

The cause of the aberration in development of renal and ureteral anomalies is difficult to prove. Young and Davis<sup>1</sup>, with others, have studied this interesting condition, and I will refer you to their articles and to the text-books on embryology. Briefly, practically all anomalous conditions of the kidney and ureter may be traced back to aberrations in development of the ureteral bud.

Many tables have been compiled of the relative frequency of anomalous conditions of the kidney and ureter, but as medicine advances there is an increasing desire to more perfect diagnoses, and these tables will be of little value in the future. Present day refinements, particularly the study of the kidney and ureter by the injection of radiographic media, will formulate a correct diagnosis in nearly every case.

Up to January, 1922, according to the studies of Rathbun<sup>2</sup>, 108 cases of horseshoe kidney alone have been reported. Of these, only 22% were diagnosed before operation. In the 16 cases from the Mayo Clinic up to January, 1922, as described by Judd, Braash and Scholl<sup>3</sup>, a correct diagnosis was made in 50%, but it would be safe to say that at the present time in a well equipped hospital nearly 90% of horseshoe kidneys will be correctly anticipated. According to H. Naumann<sup>4</sup>, in a series of 10,177 autopsies, 100 malformations of the kidney were found, of which 17 were horseshoe kidneys: being one in about 600 cases.

Carlier and Gerard<sup>5</sup>, from a series of 68,000 autopsies placed the ratio at 1:850.

Bugbee and Woolstein<sup>6</sup>, in 4900 autopsies in the Babies' Hospital, found anomalies in 3% of children. Braasch<sup>7</sup>, reports from a series of 649 renal operations, one anomaly was found in every 26 cases. Harpster, Brown and Delcher<sup>8</sup> have recently published a most complete resumé of the literature up to that time, describing 40 cases of complete bilateral duplication of the ureter; 28 incomplete bilateral duplication; 10 complete unilateral duplication, with a distinct supernumerary kidney; 171 unilateral complete duplication with fused kidney; 9 incomplete unilateral duplication with distinct supernumerary kidney; 114 incomplete unilateral duplication. It is interesting to note that those observed in the last few years had a very high percentage of diagnoses made by urographic technic.

The chief interest to the profession in these anomalous conditions of the kidney and ureter lies in the fact that they are far more liable to pathology than the normal. In fused and horseshoe kidney there seems

to be a particular tendency toward hydronephrosis. In the horseshoe kidney it may appear in either one or both of the pelves, while in fused kidney it is more apt to be in the lower pelvis, as that seems to have a far greater capacity than the upper one in the majority of cases. This, however, is not always true, as in 3 of my own cases of fused kidney, the upper pelvis was found to be an infected hydronephrotic sac. Calculus formation is frequent.

A preoperative diagnosis is most necessary in anomalous conditions because of the advantage in considering the exact type of operation to fit each individual case;—therefore, the urge for complete cystoscopic, renal functional test and urographic data. In incomplete duplication of the ureter and renal pelvis, it is impossible by ureteral catheterization alone to gain sufficient knowledge of the condition, as only the delineation of the bifurcation of the ureter can be shown by pyelographic means.

In commenting upon the tables as compiled by Harpster, Brown and Delcher, we find the most frequent anomaly to be the unilateral complete duplication of the ureter with a fused kidney. This I think coincides with the general opinion of urologists today. The large number of cases of incomplete unilateral duplication reported seems to be rather out of proportion to the others, although this condition can only be determined by urographic study, or at autopsy.

The smallest number of cases quoted is of that type described as incomplete unilateral duplication with distinct supernumerary kidney. This is the usual experience; it being a fact that any type of anomaly in which a distinct supernumerary kidney is found is very rare.

The most frequent types of anomalous conditions of the kidney and ureter usually met with, and of interest, will now be described.

Single kidney occurs where there has been failure of the ureteral bud to develop, and probably occurs in about one to 600 people. This does not take into consideration the fact that many kidneys atrophy and become useless and rudimentary, fulfilling no func-



tion in the body. Perfect health is, of course, permissible with a single kidney, as compensatory hypertrophy is usually present, but the statistics of Anders<sup>9</sup> show that like all the other anomalous kidney conditions, it is more liable to pathologic change than are normal organs.

The supernumerary kidney is a rare anomaly, particularly that known as the free supernumerary kidney, that is, one lying free, with its own ureter, generally placed below the kidney on the side of which it lies. Such a kidney is usually small and atrophic in character, and its ureter commonly anastomoses with the ureter from the kidney above.

Double kidney is caused by the fusion of a free supernumerary kidney with the normally placed kidney above it. It is probably the most frequent form of anomaly of the kidney and ureter. Such kidneys usually show a definite fusion point, and are, of course, elongated and show irregularity in their outline. They have 2 separate renal pelves, and 2 separate ureters that may or may not anastomose before entering the bladder. The lower pelves of such kidneys are usually dilated, and show changes of a pathologic nature more frequently than the upper, the latter portion being usually considered the normal one. Double kidneys may show no sign of fusion and appear only as large kidneys, but their pelves are always separate.

Horseshoe kidney is well known and is so named because of its resemblance to that antiquated apparatus. It usually lies across the spine, and is caused by the fusion of 2 poles of the opposite kidneys. This fusion has in my experience been most often that of the upper poles, while others report the opposite. If the upper poles unite, the kidney is, as a rule, situated high up in the abdominal cavity, and is more difficult to approach surgically. Fusion of the lower poles brings the kidney well down, so that it may be mistaken at times for an abdominal, or even pelvic tumor. The point of fusion between the 2 kidneys may be thinned out, and sometimes be nothing more than a fibrous band, but is often fairly dense in char-

acter, and contains much functional tissue. According to the researches of Eisendrath and others, the incidence of horseshoe kidney is about 1 in 1000 persons. The liability of pathology is shown when it is noted that 1 out of 6 are diseased. The frequency of horseshoe kidneys found at the Mayo Clinic during kidney operations was 1 in 151.

The diagnosis, even by pyelogram, in this type of kidney, is oftentimes difficult, and frequently impossible. From a surgical standpoint, the high placed horseshoe kidney in corpulent subjects is oftentimes difficult to approach, and in my own experience I have found it impossible to remove the hydronephrotic end of a horseshoe kidney because of the difficulty of delivery.

Sigmoid kidney is formed by the fusion of the lower pole of one kidney to the upper pole of the other. It is a very rare anomaly, but has been reported by M. C. Winternitz<sup>10</sup>.

Anomalies of position must be mentioned because of the fact that ectopic kidneys are usually altered in their outline, their blood-vessels and ureter suffering in their functional capacity from such change. In normal kidneys a slight amount of movement is possible. A distinction must be drawn between the true congenital ectopic kidney and the one acquired by exertion or through descensus of other abdominal organs. The congenital ectopic kidney is usually placed low in the abdomen, oftentimes even in the bony pelvis, and has short ureters going directly to the bladder, and normally placed ureteral orifices, with blood-vessels coming off the nearest large vessel, either the lower aorta or the iliacs. The acquired ectopic kidney may be recognized from the fact that it has a normal length of ureter which is often shown by radiographic catheter to be so altered in its shape as to show actual looping. Ectopic kidneys sometimes lie on the same side of the body, their ureters being normally implanted in the bladder. Such crossing of the kidney to the other side is known as crossed dystopia. Excursions of the kidney are more frequent in women than in men, and the right is displaced more often than the left.

In anomalies of the ureter and renal pelvis

the most frequent condition noted is double ureter, there being practically always 2 renal pelves with separate ureters running to the bladder and with separate ureteral orifices showing in that viscus. This is the type called complete unilateral duplication. Incomplete unilateral duplication means the fusion of the 2 ureters at some place between the kidney and bladder, the most frequent position being near the upper part of the lower third. This condition, of course, presupposes the presence of a fused or double kidney on this side, but in a few cases it may be present when the supernumerary kidney exists. This, and the complete duplication of the ureter with supernumerary kidney are rare coincidences of embryologic fault. In complete duplication, the ureter from the pelvis situated in the uppermost portion of the kidney practically always crosses that of its mate, and enters the bladder with the lowermost outlet. This is in accordance with Meyers' law. The pelves of a double kidney practically never connect. Papin<sup>11</sup>, in an immense number of cases never has found it. Braasch and Scholl<sup>12</sup> do not report its presence. Single ureter, running from a single pelvis, and bifurcating just before entrance into the bladder, with corresponding 2 ureteral orifices, is extremely rare. The ureteral orifices in the bladder are usually close together on the ridge, but one is oftentimes aberrant, and may be found in some other portion of the bladder, posterior urethra or rectum, or vaginally in the female.

It would seem from the reports of many authors that anomaly of the kidney or ureter of some type is present in a ratio of nearly 1 to 300 people. What special signs or symptoms are to be looked for in these conditions? The history and physical examination is of very little value, with a few distinct exceptions. A history of pyuria beginning in early childhood and continuing for years is very suggestive of renal anomaly. This was an outstanding condition in 3 of my own cases of double kidney that later came to operation. Intermittent or continued pyuria, particularly when there is no complaint of dysuria, is most suspi-

cious, as these infections often drain well and have little tendency to complicate the bladder. Vague abdominal pains, with severe intermittent crises, should be studied by urography, because the manifestations of anomaly are not always severe in their detail. A history of incontinence of urine without any appreciable cause, particularly in a young person, should lead one to suspect aberrant ureter, opening as they often do in the urethra, vagina or fallopian tube. There are no other absolutely classical symptoms of these anomalous conditions. They, however, give many real and vague symptoms of other diseases. The so-called "Dietl's Crisis", appendicitis, indigestion, adnexal disease, duodenal and gastric ulcer, have all been simulated. From symptoms alone no diagnosis can be made. It is only after the routine urologic examination, which includes cystoscopy, renal functional test, ureteral catheterization and urography, that these conditions can be picked out. On physical examination, the only condition suggestive of renal anomaly is in those types of horseshoe or fused kidney lying low in the mid-portion of the abdomen in the male, otherwise the findings of a physical examination are not more conclusive in this condition than in any other. The fact that probably over 75% of renal anomalies have only been discovered at operation by the general surgeon when some other condition had been anticipated, would urge one to exhaust all methods of diagnosis before entering an abdomen.

Abnormal organs being more susceptible to pathology than normal ones, the proportion of diseased anomalous kidneys and ureters will be found to be much greater than in the normal. In 51,504 autopsies, Botez<sup>13</sup> found horseshoe kidney in 1:715 cases; while in a series of 1000 kidney operations, it was found 5 times more frequently. In 2424 kidney operations at the Mayo Clinic over a period of 10 years, horseshoe kidney was operated on in the proportion of 1:151.

Sacquepee<sup>14</sup> makes an interesting notation that in double ureter, the more separated the ureteral orifices in the bladder, the more the kidney is apt to be diseased, the dis-



ease being more marked in the pelvis drained by the aberrant ureter.

In fused kidney, the lower pelvis is usually the most dilated, and usually contains the most pathology. It may nearly always be rated as hydronephrotic to some extent, and often becomes infected, with subsequent alarming symptoms. Calcareus disease is a frequent complication, with its usual symptomatology.

According to statistics the female is more susceptible than the male to anomalous conditions of the kidney, and may present symptoms that are often ascribed to neurasthenia. The intervention of pregnancy, with its interference of renal drainage, is practically sure to start a severe pyelitis in one of the pelves of a fused kidney. I have discovered this in 2 patients who aborted, despite all treatment, and were nephrectomized, one case going on to a successful labor 2 years later with a single kidney. Not always is the anomalous kidney at fault, as my records show 1 case of nephrectomy done for calculus pyonephrosis on a single kidney, where the remaining one was a double kidney as yet without pathology.

Under treatment, one of the most pleasing features in the consideration of the anomalous kidney is the fact that conservative surgery offers frequently a satisfactory result. Thus in horseshoe kidney, and in fused kidney, heminephrectomy can successfully be carried out with a resultant cure. Even bilateral heminephrectomy has been successfully accomplished in bilateral double kidney by Eisendrath<sup>15</sup> for calculus pyonephrosis in the pelvis of one kidney and an infected hydronephrosis in the other. The greatest difficulty is experienced in some of the types of horseshoe kidney, particularly those placed high up in the abdominal cavity, lying equipoised across the spinal column, with a heavy isthmus of renal tissue.

Calculus disease when encountered may be treated nearly on the same lines as when

found in an ordinary kidney. It has not been my experience to meet with tuberculosis of an anomalous kidney as yet, and I do not agree with Hymen<sup>16</sup> that it is a frequent complication. Bearing in mind the fact of the usual tubercular infection in a kidney, I do not believe that heminephrectomy is indicated in this type of infection.

(Dr. Woodruff gave a very interesting lantern slide demonstration of the anomalies herein discussed).

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## DISCUSSION.

(The address delivered by Prof. Edward L. Keyes, and published in the October Journal, formed a part of this symposium and a basis for the discussion which follows).

**Dr. J. Thompson Stevens:** I was especially interested in the excellent paper of Dr. Keyes, because I had the honor at this meeting a year ago

tion, and radium. In his paper, Dr. Keyes advises 2 methods of treatment: surgery to reach the disease, and radium to eradicate it. I cannot

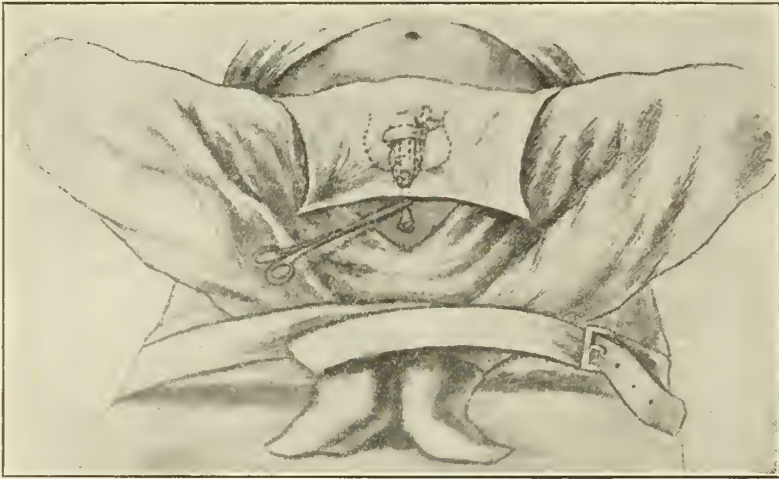


Fig. 1—Position of patient for suprapubic cystotomy. Bladder filled with silver nitrate solution, clamp on catheter, and tourniquet about body of penis. (Pfahler & Thomas).

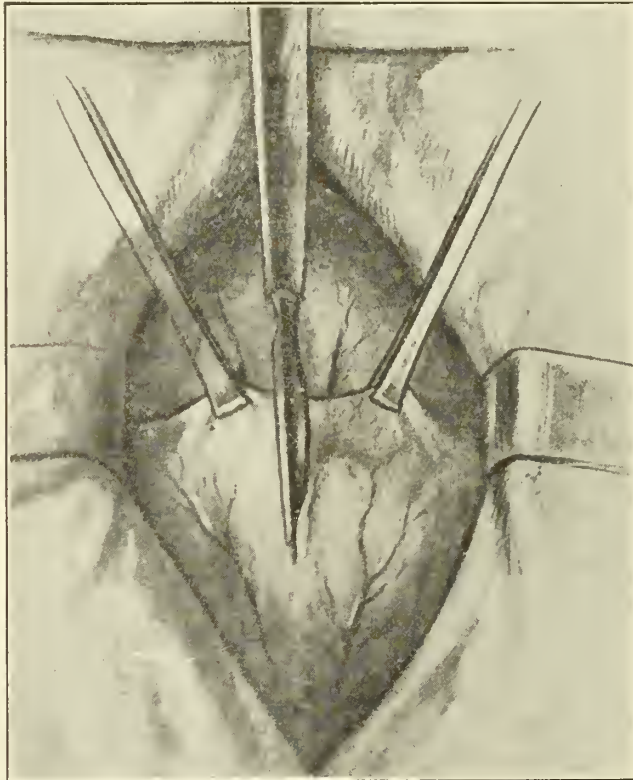


Fig. 2—Bladder exposed and grasped by forceps before catheter is released and removed. Bladder incision high up on fundus. (Pfahler & Thomas).

of presenting a paper on the technic of the treatment of carcinoma of the bladder by means of surgery, Roentgen rays, electrothermic coagula-

tion, and radium. In his paper, Dr. Keyes advises 2 methods of treatment: surgery to reach the disease, and radium to eradicate it. I cannot



the accurate application of radium throughout the disease by means of the cystoscope.

If you remember, Dr. O'Crowley a year ago raised the question of the treatment of these bladder carcinomas by the implantation of radium emanation seeds. At that time, I expressed the opinion that the radium emanation seeds glass filtered were not the equal of the radium element because of the fact that the sloughs which oftentimes followed the treatment by this method were occasionally worse than the trouble itself. Dr. Keyes secures the same action by ra-

not infrequently the patient is pain-free at the conclusion of the treatment.

If any one is going to treat these carcinomas by a cystoscopic route, it is well to note that control of hemorrhage is oftentimes very important because it permits one to plant his radium much more accurately, when he can see what he is doing.

The Roentgen treatment, in addition to stopping the bleeding and pain, is very important in closing up the lymphatics which drain this area thereby tending to prevent the possibility of me-

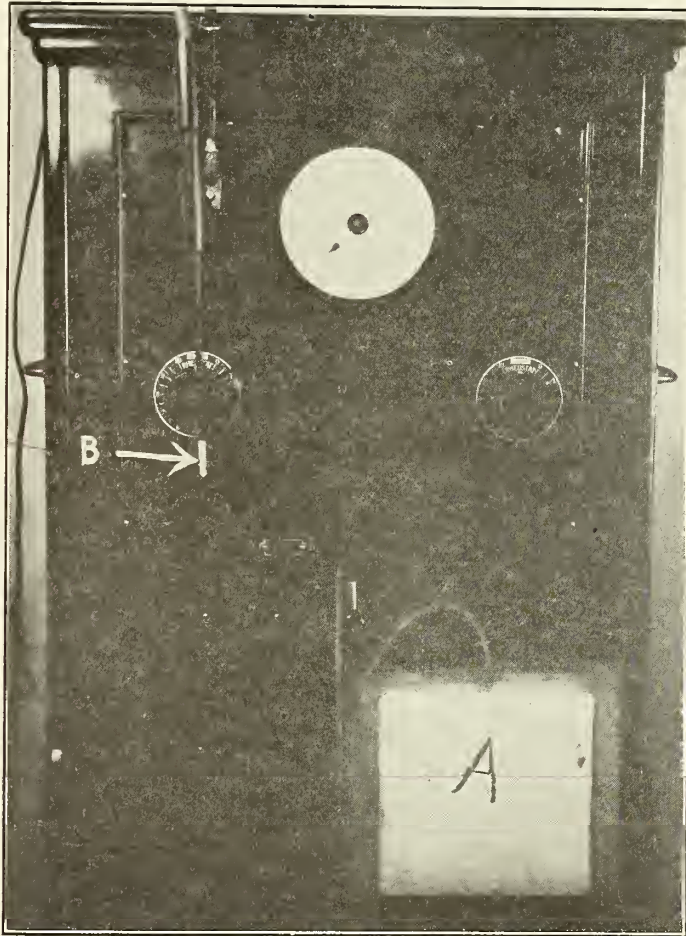


Fig. 3—Apparatus for electrothermic coagulation which has been made portable. (a) Indifferent electrode which is placed under buttocks, (b) Active electrode for destruction of tumor.

dium emanation metal filtered that is secured by one who uses the radium element in steel needles, which I use.

Dr. Keyes mentioned fulguration but did not mention anything in connection with roentgenotherapy in these important tumors of the bladder. In our work, the treatment of bladder carcinoma is always begun with thorough irradiation with Roentgen rays of 200,000 volts. In this way, we feel that we secure marked palliation. The bleeding is stopped in almost every case, and

chanical metastasis at the time of operation. That is also very valuable. At the Mayo Clinic, they claim that preoperative radiation sickens these malignant cells, or makes them harder and more difficult to transplant by mechanical means.

Coagulation, as you know, is secured by the many oscillations of a high frequency current applied by the bipolar method, in the treatment of bladder carcinoma. This coagulation seals the lymphatics, and there is no bleeding at the time of the operation if the coagulation is properly

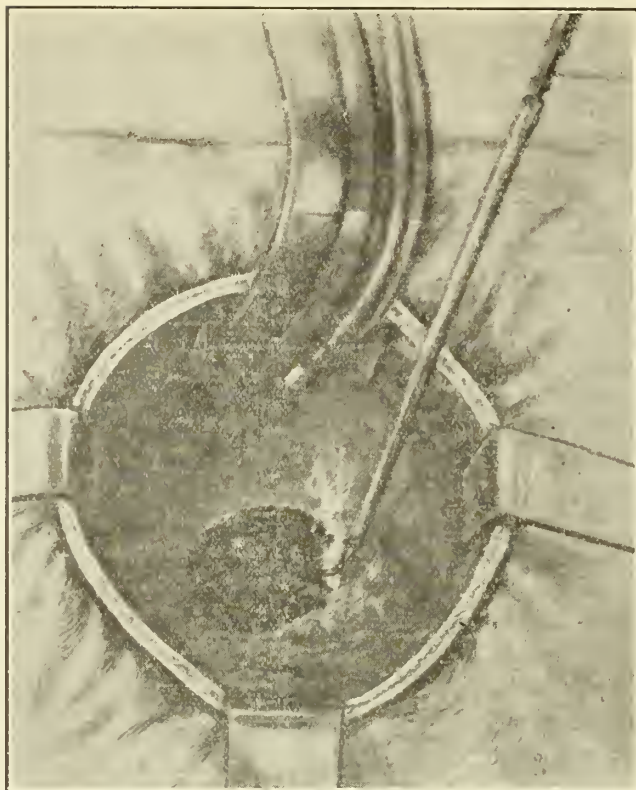


Fig. 4—Electrothermic coagulation of tumor within the bladder by means of a suprapubic cystotomy. (Pfahler & Thomas).

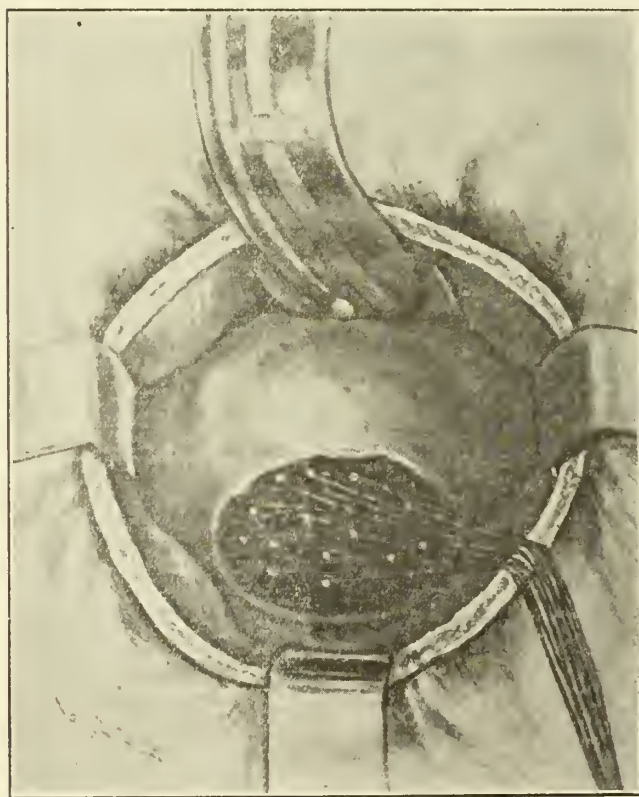


Fig. 5—Radium needles placed in base of tumor following electrothermic coagulation and removal of the tumor. (Pfahler & Thomas).



done. That is also of great importance in the prevention of mechanical metastasis.

In the past, all of us have treated carcinoma by local applications of various kinds, and we have all had failures because of mechanical metastasis. Anything we can do to prevent mechanical metastasis in the treatment of carcinoma is quite important. There are 2 things we can use for this purpose: electrothermic coagulation and radiotherapy. The advantage of coagulating a malignant lesion, as compared with the ordinary method of cutting, is that when we get a healing we invariably get a soft, pliable scar, as

tient comes to the operating room following the preoperative Roentgen treatment. His bladder is filled with a solution of silver nitrate, and a large pad is saturated with a saline solution and placed underneath the buttocks. That goes to one pole of the machine; the other pole is a point, the operating electrode. The operating pole is used to destroy the tumor in the bladder by means of electrothermic coagulation. By this method, there is no bleeding, blood-vessels feeding and draining the part and the lymphatics are closed, tending to prevent any possibility of mechanical metastasis. Radium element in the form of

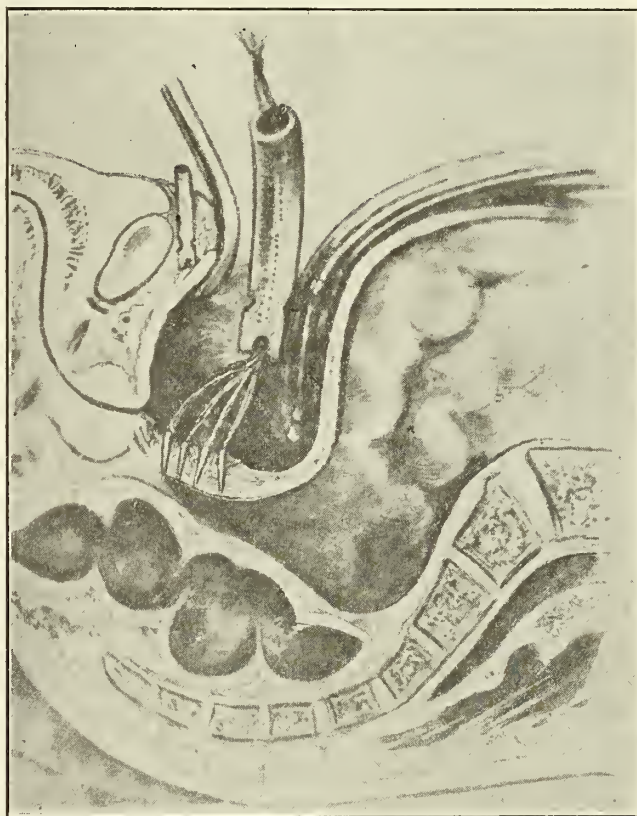


Fig. 6—Sagittal section, radium needles in place with their threads passed through drainage tube. (Pfahler & Thomas).

compared with the hard scars which sometimes follow surgical procedures, but more important is the fact that mechanical metastasis is practically nil.

If you will permit me, I would just like to review by means of lantern slides the technic which was presented here last year in the treatment of bladder carcinoma. (Dr. Stevens exhibited a series of slides illustrating the following points):

As I said before, the first thing we do is to thoroughly treat the patient by means of the Roentgen rays. The entire pelvis is treated. By this means, we often secure relief from pain and the hemorrhages are invariably stopped. The pa-

tient comes to the operating room following the preoperative Roentgen treatment. His bladder is filled with a solution of silver nitrate, and a large pad is saturated with a saline solution and placed underneath the buttocks. That goes to one pole of the machine; the other pole is a point, the operating electrode. The operating pole is used to destroy the tumor in the bladder by means of electrothermic coagulation. By this method, there is no bleeding, blood-vessels feeding and draining the part and the lymphatics are closed, tending to prevent any possibility of mechanical metastasis. Radium element in the form of

needles is implanted evenly throughout the coagulated tumor base. These needles (using 5 milligram needles) are placed 1 cm. apart; if you are using 10 milligram needles, they are placed 2 cm. apart. The needles are buried in the coagulated base of the tumor and the drainage tube is sutured at the uppermost angle of the incision, the threads being attached to the radium needles. Then in the closure of the abdominal wound, the bladder is rotated downward and the radium needle threads are passed through the rubber drainage tube.

This line shows the rationale of using com-

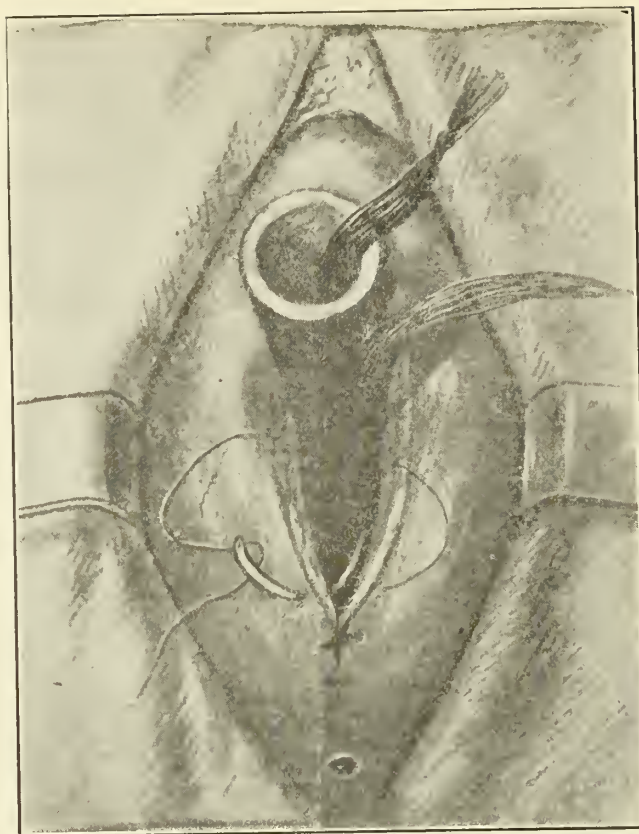


Fig. 7—Closure of Bladder showing placement of drainage tubes and threads to radium needles. (Pfahler & Thomas).

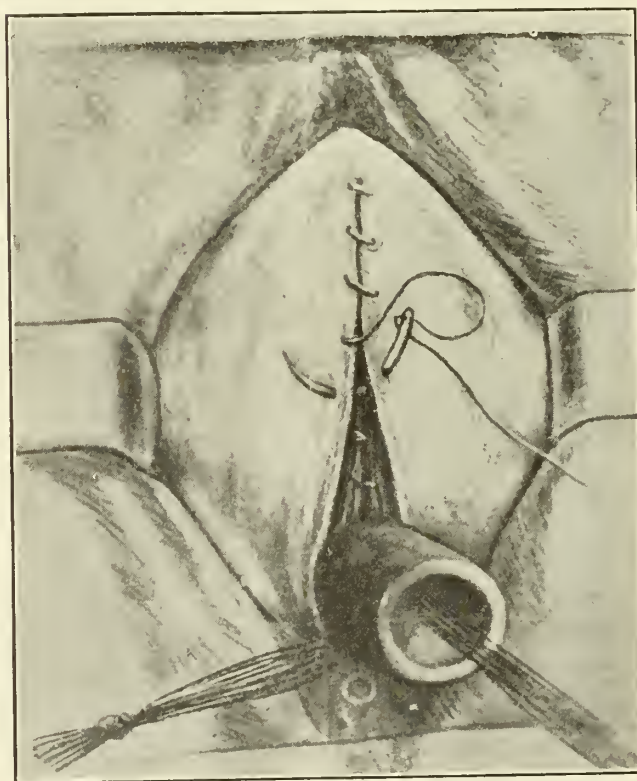


Fig. 8—Bladder rotated downward by drainage tube which is fixed by stitches through lower angle of skin incision. Recti muscles and fascia are being closed. (Pfahler & Thomas).



bination Roentgen rays and radium in the treatment of any carcinoma that lies beneath the skin. We cannot administer more Roentgen rays through one port of entry than the skin, which is the first tissue to be attacked by the rays, will stand. There is no theory about this at all; this slide is the result of actual measurements of rays, made by means of the iontoquantimeter. We cannot administer any more than 170 electrostatic units to one skin port. When we come down to the center of the pelvis where the tumor is located we find that with this tension of rays and this filter, we have only 52.7 electrostatic units left of the original 170 electrostatic units. That is secured through an anterior port

tional 53.25 electrostatic units, the summation of the two being 192.65, which brings our dose up to the required amount of radiation to destroy the carcinoma.

The thing that appeals to me as being most necessary is the use in the treatment of anything that is malignant of every agent that we have at our command. The treatment of a malignant lesion by the usual method was to operate on it by some method, either coagulation or regular surgery and then leave it. If something happened, we would apply radium perhaps, if we had a recurrence. By and by, we might suggest Roentgen rays and try that for awhile. You can't get results in that way. It is absolutely impos-

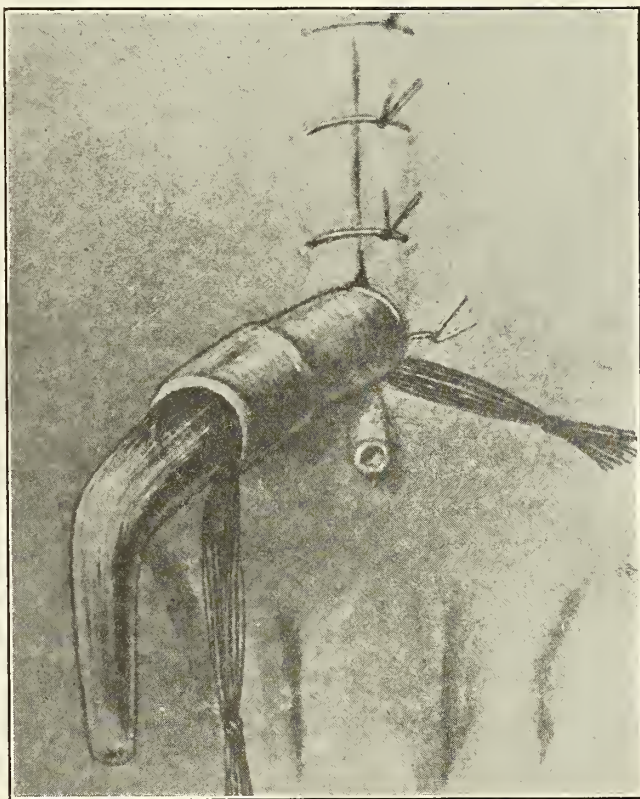


Fig. 9.—Skin sutured showing drainage tubes and threads to radium needles. (Pfahler & Thomas).

of entry, and that dose is far below that which is necessary to even sicken these carcinoma cells. So we select a posterior field, where we can secure 86.7 electrostatic units. This is possibly because the center of our pelvis in this case is only 4 cm. from the posterior surface of the body whereas it was 10 cm. from the anterior surface. It shows a gradual diminution in the quantity of rays, the deeper into the parts you go. The total of 52.7 electrostatic units plus 86.7 units is only 139.4 electrostatic units, and still the dose is too little. By the use of radium buried into the coagulated base of this tumor, we secure an addi-

sible. Most of those cases would die of this disease. If you can get a correct summation of actions of all these different agents on one patient at the initial offensive, your results will differ from those that you find spread upon the pages of medical literature at this time.

**Dr. Joseph Koppel** (Jersey City): I was sorry that I was late this morning and therefore missed part of Dr. Keyes' paper, but I was fortunate enough to have heard all of Dr. Woodruff's paper. Of course, there is only one Dr. Woodruff, as far as cystoscopy and pyelography are con-

cerned. I have seen Dr. Woodruff do the most difficult pyelographies that I have ever witnessed.

Dr. Woodruff, I believe, in connection with one of the cases that he presented, called attention to the fact that the patient had been operated on twice for appendicitis. I just want to emphasize this fact: that in many cases of infections of the kidneys or ureters (genito-urinary infections) the patient comes to the doctor presenting symptoms of a gastro-intestinal nature only; there are absolutely no urinary symptoms whatsoever. In these instances, of course, the urinary tract is entirely overlooked by the doctor and the patient is operated for some abdominal condition.

are sometimes very, very difficult to cystoscope, and to trace and pyelograph, as the doctor has said.

I wish to compliment Dr. Woodruff on the many extraordinary cases that he brought out.

The horseshoe kidney, which the doctor mentioned as the last one that was operated upon with good results, is quite a rare case (as far as such good postoperative results are concerned) as I understood the doctor to say that part of the kidney on one side was resected.

I want to go back to Dr. Stevens' paper on the operative procedure in tumors of the bladder.

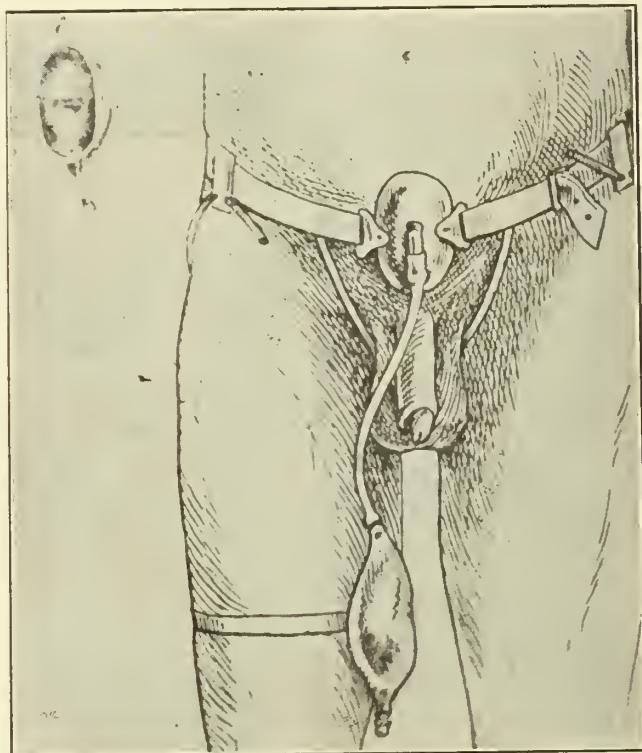


Fig. 10—Ambulatory suprapubic drainage apparatus used on removal of the Bladder drainage tube. This is removed as soon as the fistula to the Bladder is healed.

Time and again urologists meet these cases that were operated upon without cystoscopy or probably without x-ray examination to find the real, true condition. I remember distinctly a case that was operated on for appendicitis once, then for adhesions afterwards. The symptoms were not relieved until an x-ray and cystoscopy showed that the patient had a stone in the right renal pelvis. This stone was removed, and the patient is perfectly well now after 3 years.

The various double ureters that the doctor showed looked very nice on the screen, but they

Dr. Stevens very ably presented something on that subject last year, and I am still of the same opinion that I was last year. We have tried these various methods—simple operation without any radium or electrothermal coagulation, fulguration, and so on—we have tried these methods separately and combined (that is, operative procedure with electrothermal coagulation and radium) and the results that at least I have obtained in all these cases, whether they were done simply by one method or by a combination of these methods, have not been encouraging.



## RENAL VASCULAR DISEASE: NATURE AND TREATMENT.

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The prevalent classifications of renal vascular disease have been based on the morphologic pathology. Many attempts have been made to arrange the numerous and confusing gross or microscopic pictures under distinctive types; and as a corollary, it has been held up as the aim of the scientific clinician to recognize which of these types is present in an individual patient, from the albumin, the kinds of casts and other characters of the urine, from the results of blood analyses, or from various tests of renal function. So far as these investigations have developed facts, they must be accorded due respect and authority. At the present time the work of Volhard seems to be the most complete and convincing as regards the pathologic alterations of the kidney structure and the relation of these to clinical phenomena. In this country, Christian has proposed a classification chiefly with a view to simplicity, which is so essential for any general adoption by practitioners. Even though all sorts of mixtures are found more often than pure types, and though the same case may change its character with time, the morphologic classification still has some value and some bearing upon treatment and prognosis. I shall omit the presentation of any such classification here, partly because I have nothing to add to this phase of the subject, and partly because I wish to lay more stress on the chemical differentiation.

For clarity of thought and of therapy on the part of physicians in general, it seems to me most simple and practical to distinguish broadly between the toxic and the mechanical results of renal vascular disease. One of these groups is characterized by retention of nitrogenous waste materials, phosphoric acid and perhaps other chemical poisons, which reaches a fatal stage in the

form of true uremia. The other group is characterized by abnormalities in the economy of salt and water, causing mechanical disturbances in the form of edema and hypertension. The terminal state in these conditions, marked chiefly by convulsions and other nervous and circulatory disturbances, was formerly confused with uremia but is now generally designated as pseudo-uremia or eclampsia. Blood analyses, in conjunction with other routine tests, afford means of distinguishing between the two groups or recognizing the numerous mixed cases. It is important to keep this distinction clear in therapy; for example, not to attempt to treat the mechanical disturbances on a theory of intoxication. The retention of toxic products of protein is to be treated by restriction of the protein intake, while restriction of salt or water is not always necessary and sometimes is undesirable or dangerous. Edema or hypertension requires not restriction of protein but restriction of salt, which in turn reacts upon the water exchange. The results of these methods have demonstrated their value, and in proportion as they have been correctly applied the control of renal vascular disease has been improved.

A general criticism of all the dietary methods may be that they are directed solely against symptoms, that they therefore cannot hinder these diseases from running their appointed course, and that we cannot properly speak of control of these diseases until we discover a true specific. This argument is strengthened by the belief which is generally held, and which I also share, that renal and vascular diseases are not caused by any kind of faulty diet. The modern conception of the origin of the entire group of cardiorenal vascular disorders is fairly clear; namely, they are the results of infections or toxic damage of these organs. Damage of the heart valves causes typical heart disease. Damage of the kidney epithelium causes some of the well-known forms of kidney disease. Damage of the blood-vessels results in other forms of heart and kidney disease, high blood pressure, and arteriosclerosis. There seems to be an in-

herited vulnerability of different organs in different persons; hence the high familial incidence of these disorders. The immediate cause of damage may be any acute or chronic infection—tonsillitis, scarlet fever, influenza, pneumonia, and a long list of others, pregnancy being apparently also a frequent cause in women. Perhaps in a majority of cases the infection passes off, leaving only the organic damage behind. In another large class of cases there is a persistent focus of infection in the teeth, tonsils, sinuses, appendix, gall-bladder or elsewhere, the absorption of poisons from such foci being thus a cause of continued aggravation of the condition. All are agreed that foci of this kind should be eliminated as one of the primary steps in treatment.

Granting that the primary cause of these disorders is beyond the reach of any but preventive therapy, we must still determine the extent of the influence of functional overstrain and functional rest. With mechanical defects of the heart, it is believed that mechanical rest not only relieves symptoms but also enables the heart to hold out longer. The closest analogy is afforded by the pancreas in diabetes. Here the origin in organic damage from infectious or toxic agents is strictly similar to the conditions in renal vascular disease. The treatment has been directed to the control of glycosuria and hyperglycemia, and it has been found empirically that the thorough control of these symptoms also controls the disease itself. Later the scientific explanation of these clinical observations was supplied by pathologic studies, demonstrating the hydropic degeneration of islands of Langerhans due to functional overstrain and the halting of this degeneration by functional rest. In other words diabetes, long regarded as the perfect type of a spontaneously progressive fatal disease, is held completely stationary when the overtaxed function of the damaged pancreas is relieved by means of either diet or insulin. The progressiveness is not arrested when the symptoms are not controlled; i. e., when the treatment is careless, or when the severity is too extreme to permit of complete symp-

tomatic relief by diet (before insulin was discovered). We may therefore inquire to what extent these principles are applicable to renal vascular disease.

Clinical interpretations are bound to vary, and it is therefore important to establish the significance of functional influences by animal experimentation, as was done for diabetes. Fortunately, the principal manifestations of clinical nephritis can be reproduced by methods similar to those used for reproducing clinical diabetes in animals. It is recognized that part of the phenomena of kidney disease are due to simple quantitative deficiency of kidney tissue. This deficiency can be imitated by partial resection of the kidneys. Most recent authors have reported that too extensive resection is followed by sudden death, and less extensive resections by practically no symptoms. Such reports are defective because of disregard of the element of functional overstrain. When kidneys which are seriously reduced in functional capacity by resection are subjected to prolonged functional overstrain by means of diets high in protein or salt or both, the following symptoms of clinical nephritis can be reproduced.

(1) Azotemia or nitrogen retention, with extremely high figures for blood urea, creatinin, etc., and with death in uremia.

(2) Acidosis, with high phosphate and low plasma bicarbonate percentages.

(3) Anasarca, which has long been considered impossible to produce experimentally. Dogs are highly insusceptible, and other species show different localizations of fluid retention than man, but huge ascites and subcutaneous edema are readily produced by salt feeding in totally or partially nephrectomized sheep.

(4) Blood volume changes, in the sense of a reduction in some instances and a great increase of plasma volume after intake of salt or water in other instances.

(5) Hyposthenuria, or reduction of the normal power of varying the concentration of the urine, which ranks as one of the most distinctive signs of nephritis.

(6) Anemia, occurring in the severe



stage, possibly only as an accompaniment of cachexia.

(7) Albumin, casts and red cells in the urine, resulting definitely from dietary overstrain but remaining permanently thereafter.

(8) Pathologic changes in the kidneys, likewise apparently resulting from overtaxed function; but we require further experiments to prove definitely to what extent typical lesions of human nephritis can be thus reproduced.

(9) Hypertension, of genuine chronic type, which heretofore has not been very satisfactorily demonstrated in animals. We have been aided by our auscultatory method, which affords an easy means of following the pressure changes in dogs. The experimental hypertension, like the clinical form, is independent of the protein metabolism or nitrogen retention. Also it has been the fashion in recent years to stress the idea that hypertension represents a disorder of the entire vascular system, and this view may receive a shock from the demonstration that this disorder may be initiated strictly from the kidneys.

The complicating factors which exist in many human cases prevent a universal application of the same simple rules as in partially nephrectomized animals, but yet there is ground for considering the principle of functional rest as established in a broad sense. The purpose of treatment is to provide rest for damaged organs, in the hope not merely of relieving symptoms but also of arresting the pathologic changes and the progressive course of the disease. The diet should be accurately adapted to each individual case, but this becomes a simple matter when the examination has revealed the functional condition, particularly as regards nitrogen retention, edema and hypertension.

There is general agreement that the one essential treatment for nitrogen retention is restriction of protein. This may be carried to the point of a nearly protein-free diet for several weeks in the severest cases, and a ration between 20 and 30 grams per day may be continued practically indefinitely. Liberal fluid administration is valuable for

promoting diuresis in cases where the kidneys retain sufficient power to excrete fluid. Various quantities of sodium chloride, in rare instances as high as 10 grams per day, may also be required for the same reason, provided there are no contraindications. Alkaline salts, preferably by mouth, are sometimes beneficial in cases with acidosis. Glucose solutions are probably the most useful for intravenous infusions when such are needed, partly for diuresis and partly for supplying carbohydrate to reduce the breakdown of body protein. Drugs are probably useless for nitrogen retention, unless there are associated conditions which they can benefit. The older diuretics are ineffective, and the new mercurials such as novasurol, are contraindicated in the presence of marked nitrogen retention. Though sweating may remove a certain amount of nitrogenous waste, I am inclined to doubt its practical value in the chronic forms of kidney disease.

For anasarca anywhere from any cause, the primary treatment is salt-free diet. This rule applies to more than nephritis or nephrosis. When there is edema in heart disease, the first thought should be not of digitalis but of prohibition of salt. The metabolic factors of cardiac work should be considered as well as the mechanical factors. If an edema can be removed by excluding salt, the results are better and more lasting than if salt is permitted in the diet and then digitalis given to stimulate the heart to excrete it. If diet restriction alone fails to clear up an edema, digitalis or other cardiac or diuretic drugs are required as adjuvants, but the general principle should be borne in mind that rest is preferable to stimulation. In cirrhosis of the liver, salt-free diet is valuable for preventing or diminishing ascites, though it is often only partially successful. Such a diet, with abundant carbohydrate and low protein and fat, and with the aid of the new powerful diuretic drugs, gives much better results than were formerly obtained in cirrhosis cases. In renal and circulatory disorders, there may be invisible as well as visible edema, and the relief of renal or cardiac asthma or threatened edema of the

lungs by strict salt-free diet is often spectacular.

All these results of salt exclusion are familiar, and yet there is a tendency for physicians to be led away from this primary principle by various confusing innovations. One of these is the administration of large quantities of urea as a diuretic, or excessive protein feeding for driving out fluid and restoring the blood proteins. It is true that in the absence of nitrogen retention, moderate allowances of protein, perhaps 80 gm. per day, are harmless and beneficial for the general nutrition; but if there are cases which are benefited by enormous quantities of nitrogen intake, I have not happened to see them. Since acidosis tends to drive out water from the body, and the chlorides of calcium or ammonium produce an acidosis, there has been a rather widespread adoption of these substances for reducing edema. If, however, the edema can be cleared up on the principle of rest alone, this is certainly safer in the long run than the grave procedure of producing an acidosis. Furthermore, the success of the acidosis method is greatest where the diet has not been salt-free, and when a rigidly salt-free diet fails I have not been fortunate enough to get any striking further improvement by this method. Diuretics, both the older ones of the purin group (cafein, diuretin, theocin, euphyllin, etc.) and the newer mercurials (novasurol, salyrgan, etc.) are valuable adjuvants in edema cases which are too severe to be cleared up by salt-free diet alone. The contraindications must be borne in mind, and also the existence of cases which cannot be cleared up by any combination of diet and drugs. The main point to be emphasized throughout is the principle of functional rest as opposed to any form of stimulation. It is better to remove an edema by artificial means than to allow it to persist, because the fluid accumulation impedes the circulation and increases the tendency to edema. But it is very different on the one hand to clear up an edema by withdrawing salt, or on the other hand to continue to give salt and use abnormal stimulants to force the kidneys to excrete the salt. Both meth-

ods remove the symptom of edema; but one of them rests the renal vascular function and the other overtaxes it. When the function is very poor, the effect of 1 or 2 gm. of salt per day is very great through its cumulative action. The greatest mistake in the treatment of edema today is the ignoring of 2 to 5 gm. of sodium chloride in the nominally salt-free diet, and the resort to injurious overstimulation as a means of temporary compensation for this dietetic carelessness.

The treatment of hypertension is under much more dispute than the treatment of edema, and when so many physicians are too lax with their diets to control edema, it is no wonder that they fail in the harder task of controlling hypertension. We have formerly reported successful results at the Physiatrie Institute in the treatment of the great majority of such cases by strict salt-free diets. I do not desire here to reiterate these claims, or to dissuade any opponent from criticizing them. This dispute may best be left to the decision of time, of which I feel perfectly confident. The only point to add is that the refractory cases, which appear to receive little if any benefit from the diet, have frequently turned out better than anticipated, after the diet has been followed strictly for a year or more. Instead of becoming worse, as generally expected, they often become distinctly better with time, and the continued freedom from apoplexy, retinitis and other complications (which they had formerly experienced) is in harmony with the idea of an arrest of progressiveness, such as is more thoroughly demonstrated in the less extreme cases.

It should scarcely be necessary to add that hypertension cases without nitrogen retention require no special limitation of protein, and the familiar prohibitions of red meats or other forms of protein are a mere superstition handed down from the time when the various renal vascular diseases were not accurately differentiated. Nervous influences are also nothing fundamental in the etiology of hypertension, and their position in therapy has been grossly exaggerated. More or less temporary reductions of pres-



sure are often obtainable by such artificial means as drugs, bed rest, bleeding, or spinal puncture, and acutely threatening accidents may thus sometimes be warded off. Except for such temporary purposes, I have no faith in these or any other artificial measures for hypertension. One of the curious fads that sweep over the medical profession is represented by the recent introduction of liver extracts. There is no plausible theoretic basis for assuming that the liver has any connection with clinical hypertension. In former times eminent investigators fell into the error of identifying adrenalin, piqure, and other transitory glycosurias with true diabetes, and it is equally erroneous now to jump to the conclusion that laboratory forms of raised or lowered blood pressure bear a relation to clinical hypertension. I am not impressed by the clinical reports of the use of liver extracts, as indicating any real benefits or any promise of future developments in this direction. At the best, they are inferior to the routine results of salt-free diet, and in cases refractory to diet the liver extract which I tested proved unable to alter either the pressure or the accompanying symptoms in the slightest degree. If experiments finally prove that some previously unknown hypotensive substance is obtainable from the liver, I shall have no higher opinion of the value of this substance than of the nitrites or other vasodilator drugs. Clinical hypertension is merely named after its most prominent symptom. The disorder is far deeper than a mere elevation of blood pressure, and a mere hypotensive agent cannot be the remedy. This paradox may become clearer by considering a terminal stage in a hypertension case, in which the compensation has broken so that the blood pressure has fallen to normal, and yet the patient is near death. The injection of a substance to lower blood pressure could scarcely be considered promising under those conditions. But under these conditions the salt-free diet has commonly resulted in a rise of pressure, due to recovery of strength in the heart and the entire body, and followed only at a later period by further benefit in the form of a gradual fall of

pressure. These opposite results arise from the fact that salt restriction acts on the fundamental condition underlying the hypertension. There can be no lasting control of symptoms and no arrest of progressiveness unless the measure employed affords genuine relief of the disordered function.

The entire topic of this paper is merely the importance of functional influences in the causation and control of the renal vascular diseases. This influence extends to the pathology as well as to the symptoms. The research which establishes this fact will mean more than temporary comfort to patients. It means that these disorders which have been regarded as spontaneously and inevitably progressive can in most instances be halted and made to turn toward improvement instead of toward aggravation, if they are taken before they have reached an uncontrollably severe stage, and that the patients can survive much longer or live out their natural lifetimes if they adhere faithfully to the dietary regulations.

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## THE HEART IN CARDIOVASCULAR RENAL DISEASE.

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Diseases of the heart and of the circulation, in the adult, probably head the list in writing present-day mortality statistics. In the cardiac failure of middle life, hypertension and its associated conditions, occupies the first place as an etiologic factor.

In a critical study of 344 cases of hypertension seen in consultation during the last 2 years, 263 were seen because of circulatory breakdown, presenting marked evidences of cardiac failure, 25 showed signs of uremia, and in 56 there had occurred a cerebral circulatory lesion.

Some 20 years ago, Theodore Janeway, in a personal communication, and also in his subsequent writings, emphasized the fact that the large proportion of hypertensive cases ended life as cardiac cases, and in only a small proportion did a cerebral hemor-

rhage occur. This is particularly true, clinically at least, in those cases where the systolic blood pressure has reached high levels. The explanation probably is, that if any of the cerebral vessels are weak from sclerotic changes, or from aneurysmal dilatations along their walls, they give way before the blood pressure has reached such a high level. Clinically also, we usually find that cases of cerebral hemorrhage occur in moderate elevation of blood pressure.

It is the commonest kind of experience in medical practice to have patients come under observation with marked hypertension and without symptoms; however, once the cardiac muscle has lost its tonicity and fails to respond normally to the increased load which is put upon it by the high blood pressure, then symptoms appear and marked discomfort begins. A hypertensive case does well, except when a cerebral accident occurs, just as long as the heart muscle retains its function and the heart its strength, whatever the height of the blood pressure curve may be.

The question which therefore should concern us most, in the study and management of a hypertensive case is, how is the heart standing the strain imposed on it by the increase in the peripheral resistance? Not necessarily, what is the height of the blood pressure? Practically the earliest change which occurs in the heart in hypertension is increase in size; which is usually due to hypertrophy and is most marked in the left ventricle. This increase, which may be double or treble the original size of the heart, is produced by marked increase in size of the individual muscle fibers, and also by a slight increase in the number of fibers.

Three forms of cardiac enlargement are usually described in the text books; first, simple hypertrophy, a form in which the muscle wall is thickened but the cavity remains the same size; second, eccentric hypertrophy, or hypertrophy with dilatation, which is characterized by enlargement of the muscular wall and by an increase in size of the cavity of the heart; thirdly, a thinning of the muscular wall and an increase

in the size of the cavity of the heart, or dilatation.

The average weight of the heart in the adult is 300 gm. in the male, and 250 in the female. In the cardiac enlargement of hypertension, the weight of the heart may reach 750 to 1000 gm. and the muscular wall, which normally is 10 to 15 mm. thick, may reach 20 to 30 mm. in thickness. The shape of the heart also changes; the left ventricle is elongated and extends more to the left; as the condition progresses, a certain amount of dilatation occurs, and may reach such a stage that a stretching of the mitral ring results. This produces the mitral regurgitant, or systolic murmur heard so commonly in hypertensive cases. If the elevation of blood pressure continues, sclerotic changes in the arteries begin to manifest themselves. The arteries supplying nutrition to the heart share in these same sclerotic changes and this results in serious structural changes in the heart itself; these may be thrombosis of the arteries or fatty or fibroid changes in the muscle. The location of these changes, combined with fatigue of the heart muscle, or injury from toxins due to other intercurrent infections, are usually the determining factors in causing the type of cardiac failure which supervenes.

The question as to why an hypertrophied heart fails, has never been satisfactorily answered; probably there are many factors, some of which are the pathologic changes as outlined above, in others some infection may occur producing acute degenerations; in still others where no such changes can be demonstrated sufficient to produce failure, the cause of the breakdown must rest on a purely functional or physiochemical basis. The rôle of the vasomotor system is perhaps more important than is usually recognized.

Now, what are the symptoms indicating failure of function of the heart? These vary a great deal in their character and may be subjective and objective. It is remarkable how comfortable a patient may be, at least when not moving actively about, while objectively his heart seems to have reached the end of its resources. I recall a man who



came to my office for 6 or 8 months with a systolic blood pressure of 90 and a diastolic pressure of 80, both of which had previously been high; a pulse of 120; marked gallop rhythm; an alternating pulse; heart sounds which could hardly be heard at the apex; and attacks of breathlessness and anginal pain when walking a short distance. It was fully 8 months before his death occurred.

Usually the first symptom complained of by the patient is breathlessness; this may be first noticed when going up stairs, or up a grade, or walking against the wind. Another kind of breathlessness consists of the patient waking up at night and being compelled to sit up in order to breathe. Such attacks may be associated with mild grades of pulmonary edema. Both types of dyspnea may be present for many months before further symptoms appear. Pain in the chest of an anginal character, with or without breathlessness, may be another early symptom. This may be located in various regions, over the precordia, below the diaphragm, over the liver, between the shoulders, or the inner aspect of one or both arms or one or both wrists. It may radiate in various directions, up to the throat, down the arms, through to the back, and is variously described as weight, pressure, pain, squeezing or stretching. The significant thing which characterizes this symptom is that it is brought on by exertion or excitement, yet it presents the most amazing and curious variations. Some patients are much worse when they get up in the morning. One patient in this series stated that the pain came on in the morning when he washed his face and his teeth. The rest of the day he had not the slightest discomfort. He could walk long distances, go up and down stairs, lift considerable weights without any inconvenience. He subsequently died in one of these morning attacks. In another patient, and this is the more usual type, the distress came on with exertion in the evening after the principal meal of the day. This patient could do anything during the day, without distress, his work compelling him to climb stairs, and lift and move stock around the stock room, yet he had no trouble. In the evening after his dinner he

could not walk half a block without the most agonizing distress in his chest. He subsequently died on the golf field while making a drive; a favorite place, by the way, for the modern hypertensive business man to end his days. Another patient had the pain, which was located over the gall-bladder, regularly at 9 o'clock in the evening. The rest of the day he was free from any trouble. He had been treated for gall-bladder disease. On careful inquiry it was found to be his custom to do certain exercises after his night meal to aid digestion. For some curious reason he did not associate the exercise with the pain. He was relieved by stopping this exercise.

The angina associated with hypertension, as a rule, does not result in sudden death and yet some patients die in their first attack. I know of no method by which the probably fatal cases can be differentiated from those which are not so serious. Angina should always be looked at as a grave cardiac symptom and always indicates beginning heart failure. One patient with the angina of effort, and with moderate hypertension, went along for 11 years without any eventuality, yet he never could walk in the evening without discomfort referred to his chest and always relieved by standing still for a period; then he could go on again.

In the series comprising this study sudden death occurred 12 times, while marked anginal symptoms occurred 80 times. Some of these persons are still living, so this cannot be a final report. In some cases the anginal symptoms disappear entirely. This often is associated with a dilatation of the mitral ring, with development of a relative insufficiency at the mitral orifice. The same thing may occur at the aortic orifice. Examples of the former have occurred in this series. Formerly I believed that a relative insufficiency did not occur as a result of dilatation of the aortic ring in hypertension but during the last year in 2 cases of hypertension, not associated with lues, a diastolic murmur, located at the aortic orifice and transmitted down to the left of the sternum, has developed during the time these patients were under observation.

The next most frequent symptom which

brings the patient to the doctor is edema of the feet; especially an edema that is worse in the evening, at first disappearing in the morning.

If these symptoms do not abate under treatment, there is generally a gradual progression, with an exaggeration of all the early symptoms: The edema increases; the peritoneal and pleural cavities may gradually become filled with fluid; the dyspnea becomes worse, even sometimes to orthopnea; Cheyne-Stokes breathing may develop; the quantity of the urine lessens, the specific gravity rises, and the albumen increases; and the patient dies from exhaustion or from an intercurrent pulmonary edema. This is the congestive type of cardiac failure. Some cases of hypertension have repeated attacks of pulmonary edema for months or even years, from which they recover. I have under my care now a lady with a blood pressure of 260/120 for 2 or 3 years, who during this time has had several attacks of pulmonary edema, always brought on by walking after her night meal. These are most likely due to an acute dilatation; between the attacks she seems very well, does her house work and has few complaints.

One of the earliest signs indicating failure of the heart in hypertension is increase in the heart rate. This may or it may not be associated with that type of rhythm so common in hypertensive cases, gallop rhythm. This is an exceedingly interesting type of rhythm; there is no irregularity, but an additional sound is added to the cardiac sounds at the apex, producing a group of sounds resembling the noise produced by the shoes of a galloping horse striking the pavement. Gallop rhythm does not signify hypertrophy but beginning dilatation, for it will disappear with rest and with digitalis, while exercise will bring it on again or increase it. Again, gallop rhythm will disappear often when the murmur characteristic of mitral insufficiency or tricuspid insufficiency develops, depending as to whether the gallop rhythm is on the right or the left side of the heart.

Occasionally the alternating pulse may be the earliest sign of beginning heart failure.

This, too, is always a very grave sign and indicates a myocardium which is carrying its maximum load.

An enlarged heart indicates a favorable response to the elevated pressure, if such enlargement is due to hypertrophy; a systolic murmur at the apex suggests dilatation of the left ventricle, while exaggerated pulmonary second sound denotes the same thing and increase in the pulmonary pressure. A systolic murmur at the aortic orifice suggests a roughening of the aorta from sclerotic changes; dullness in the second space to the right of the sternum suggests an elongated and dilated arch, with displacement to the right. A diastolic murmur over the aortic orifice, transmitted downward to the left of the sternum, in nonrheumatic and nonluetic cases, may mean a relative insufficiency from dilatation of the aorta and stretching of the ring.

I have heard the statement made that the sphygmomanometer may be used in the adult to differentiate the murmur of relative insufficiency at the mitral and the aortic orifice from a rheumatic endocarditis. This is not always true, for a case with a rheumatic endocarditis may subsequently develop hypertension. The following 2 cases in this group are illustrations: Mrs. H., 60 years old, has had several attacks of rheumatic fever during her lifetime, with a definite lesion at the mitral orifice. About 2 years ago her blood pressure began to rise, and this year it had reached 200/110; 6 weeks ago her heart suddenly went into fibrillation; a few days later she was stricken with paralysis of her right arm and some aphasia. When seen her blood pressure was still high and her heart very much enlarged. She had a systolic murmur at the apex, and a diastolic murmur could also be heard at the apex in some of the long intervals of the irregularly beating heart. The second case was in a man aged 45, with mitral and aortic disease since childhood from repeated attacks of rheumatic fever. He had a Corrigan and pistol-shot so marked that they could be felt by placing the hand on his body anywhere, and the latter could also be heard in the abdominal aorta when stand-



ing a few feet away from the patient's bed. During the last year his blood pressure has gradually risen to 190. The diastolic, of course, could not be obtained because of the constant knock in the arteries.

A hypertensive case may also be seen for the first time in the period of secondary low blood pressure when the sphygmomanometric readings will give very little idea of what has gone before.

Another question in which there seems to be some debate is: Does the pure hypertensive heart go into fibrillation? I am reasonably sure that it does. If the mitral stenotic cases with hypertension and the thyroid cases with hypertension are not counted in the series comprising this study, there were 44 cases of total irregularity of the heart. Some of these cases may be in doubt, as they were not checked up electrocardiographically. In all, the rate was high, there was an irregularity in force as evidenced by readings with the sphygmomanometer, and an irregularity in rhythm; they were all cases of heart failure, many with edema and the patients who could be exercised were definitely made worse, as far as the arrhythmia was concerned.

Sometimes heart block may occur as a sign of failure of the heart in hypertension. This may begin as a partial block with Stokes-Adams' symptoms, the block later becoming complete. I had the opportunity of watching a man of 60 with complete block, a pulse of 35 and a blood pressure of 260/130 for 3 years, during which time he was in fair health. He died suddenly with a coronary blocking. Another remarkable case of heart block with hypertension occurred in a lady aged 50. She had had mitral disease, rheumatic in type, for many years and hypertension developed later. Then she developed heart block with fainting and convulsive attacks; later the block became complete with a ventricular rate of 30; after a period her rate fell to 13 and she became very weak; her auricles could be heard contracting at a normal rate between the ventricular beats. The next day the ventricular rate fell to 11. At this time 7 auricular beats could be counted to 1 of the ventricles.

With each contraction of the auricle a faint "whiff" could be heard, and with each contraction of the ventricle a systolic murmur. The auricular whiff was interpreted to be due to auricular contraction through a narrowed mitral ring, for she was known to have a mitral stenosis. At this time she was having marked Cheyne-Stokes breathing, with a period of apnea lasting three-quarters of a minute; during this period of apnea she appeared to be unconscious. The next day her ventricular rate fell to 9 for the minute. During the first half minute of her period of apnea, there were 3 ventricular contractions, 1 each 10 seconds. During the second half-minute she had 6 ventricular contractions, 1 every 5 seconds, making the total count of 9 to the minute. In the last 15 seconds of the minute she began to breathe again and consciousness returned. At the full minute breathing ceased, and the same cycle began once again. At this time her auricular rate, which could be easily counted, rose to 96 to the minute. This rhythm was repeated with absolute regularity minute after minute. She remained in this condition for 5 days with the auricular rate gradually rising, and finally the ventricle ceased to respond.

Occasionally in a hypertensive case there may be a sudden cessation of ventricular action. Mr. D. came to the hospital because of breathlessness and some edema of the feet. He was put to bed. I happened to be in the hospital and went to see him; he was lying flat in bed breathing rather rapidly. I put my finger on his pulse, the rate was 120 and of good quality, when suddenly, without the slightest warning, his pulse ceased to beat; a stethoscope quickly applied to his chest could elicit no cardiac contraction. He made a few respiratory efforts, then ceased to breathe. Recently a colleague of mine reported an exactly similar experience.

Sudden coronary thrombosis with sudden death, or gradual failure with pulmonary edema due to cardiac dilatation may occur. Dr. P. had a hypertension of 4 or 5 years' duration. Following an attack of influenza he developed marked anginal symptoms on exertion but after a period of rest in bed

he was much improved. One night he was suddenly seized with the most severe and agonizing pain in his chest and in both arms; morphin in large doses did not relieve the pain, nor did any of the vasodilators; his pulse rate gradually rose in frequency; pulmonary edema appeared and gradually became worse, then excessive and he died, literally drowning in his own secretions.

Another hypertensive patient developed a severe angina while I was with her. I gave her 1/100 grain nitroglycerin tablet and put my stethoscope over her heart to see if I could detect any abnormal mechanism. She complained of severe pain in her chest and in her left arm; her heart rate was 80; there was no arrhythmia; she complained of feeling faint. I then noticed that the apex rate was falling in frequency and becoming weaker. When the rate fell to an estimated 14, she lost consciousness and had a convulsion; her heart rate became slower and slower; finally all ventricular action apparently ceased; she seemed to be dead; her family left the room. I still had my stethoscope over her heart; after a few seconds there seemed to be a faint beat, then a slow, orderly and gradual return to normal ventricular action and rate. She regained consciousness, felt weak, but was entirely relieved of the pain. About 1 year later, she was found one morning dead in bed.

All remedial measures directed to protecting the circulation must naturally first be directed to reducing the load carried by the heart and blood-vessels. In cases of low diastolic pressure often a great deal can be accomplished. The obese patient must have his caloric intake reduced, and, practically, it is found that reduction of the carbohydrate intake will cause reduction of the blood pressure with coincident loss of weight. The excess water drinkers must have their fluid intake reduced, those with salt retention must have their salt eliminated, and those with nitrogen retention must have their proteins restricted to the actual body needs. A strictly salt-free diet in practice is a difficult diet to maintain, but one that if adhered to will often give brilliant results.

Right here a word of caution must be

given. Great care must be exercised not to diet too vigorously a middle-aged obese person, particularly if there is beginning organic changes in the heart and blood-vessels. I have seen several persons done irreparable injury by such a procedure. Dieting should be done slowly and cautiously; 20 pounds a year is a safe maximum.

Periods of rest are essential, both mental and physical. We are all familiar with the great good accomplished by a week in bed in hypertensive cases. Then again it is often impressed upon us how well a hypertensive patient does when forced to rest by the occurrence of a cerebral hemorrhage; the blood pressure falls, and the condition of the heart improves. I recall a patient, working at top speed, who could not or would not change his method of living. He had a cerebral hemorrhage and was forced to retire from business and lead a quiet life. For 18 years he has gone on comfortably, with a moderate elevation of blood pressure and practically no symptoms.

A doctor who comes to see me occasionally was given 5 years to live, when he was only 45, because his blood pressure was 240/120; he gave up his work, went in the country to live on a small farm; he rested a good deal, ate sparingly, and took a moderate amount of exercise; it is now 20 years since he gave up his work.

Digitalis, as ever, is the remedy in failing circulation and it acts favorably in hypertension when the heart begins to fail, even when the mechanism is normal and there is no arrhythmia. Gallop rhythm will frequently disappear under its use. Alternation will sometimes disappear for a period. Alternation, however, is a very serious state and indicates a heart muscle which has reached the limit of its strength. Fibrillation of the auricles is, of course, the condition in which digitalis accomplishes its most spectacular results. A sufficient amount should be given to maintain the heart rate at about 80 or 90 to the minute.

Edema and marked breathlessness demand absolute rest in bed, restriction of fluids and elimination of salt. Digitalis is usually indicated; sometimes a diuretic like theobro-



min or theophyllum, or, in non-nephritic cases, novarsurol.

#### CONCLUSIONS.

(1) A resumé is given of 263 cases of cardiac breakdown, occurring in 343 cases of hypertension.

(2) Emphasis is laid on the condition of the heart muscle as a more valuable aid in prognosis than the height of the blood pressure curve.

(3) The usual, and some unusual, methods by which the hypertensive heart fails, are discussed.

### THE THERAPEUTIC PROBLEMS OF RENAL VASCULAR DISEASE AND THEIR RATIONAL SOLUTION.

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Faulty methods, or rather practices, are in widespread use in the treatment of nephritis. I mention the ban on meat, and on "red meat" in particular, and the anathema placed by some on eggs. While obviously not based on scientific grounds, such practices are continued, setting up a false goal and misleading the patient altogether on the therapeutic problem. Patients, it is true, have certain deep-rooted ideas on the subject, and it may be the easiest way out to accept their prejudices. So, red meat is credited with the creation of "acid" and eggs are brought into relation to albumen found in urine. The rôle of salt in the regulation of the water balance of the body is not always appreciated. Fluids are restricted or forced without knowledge of the underlying principles. Diets are poorly balanced, and total caloric intakes are often not adapted to the individual case.

What then are the proper methods and the principles which should govern the physician in the treatment of patients suffering from nephritis and vascular renal disease in particular?

We must keep in mind that chronic nephritis is never a disease of the kidneys alone, but is always associated with general

and local disturbances, which are varying in kind and degree in different types of the disease. In fact, the abnormalities which dominate the clinical picture, such as hypertension, edema, toxemia, have been used in the classification of the different types of the disease. These clinical abnormalities are, of course, correlated to underlying anatomic and metabolic abnormalities, and present problems which must be solved chiefly along metabolic lines.

The causes of renal disease are often obscure and often beyond reach, but known or even suspected causative factors should be eliminated whenever possible. Toxins of bacterial or metabolic origin are especially incriminated. Focal infections should, therefore, be given due attention. Intestinal toxemia should be relieved by appropriate measures, proper selection of diet, proper evacuations, exercise, etc. The use of beverages containing chemical irritants should be forbidden.

The kidneys should obviously be spared, not only by removing bacterial and toxic irritants, but also by imposing upon them the minimum amount of functional duties compatible with proper nutrition. A certain latitude may be granted in this respect. The kidneys being the sole excretory organs for the derivatives of protein metabolism, may still be fit to excrete nitrogenous end-products faultlessly; or the excretion may be incomplete, resulting in nitrogen retention in the blood and tissues. In the latter case protein metabolism should be restricted to the maximum degree compatible with safety; in the former protein metabolism need not be so severely reduced.

Protein metabolism depends primarily on the amount of protein food consumed, but also on the catabolism of protein due to life itself. Fever, due to complicating acute infections, may throw an enormous strain on a poorly functioning kidney, and the physician should be apprehensive of the dangers threatening his nephritic patient suffering from an acute infection, even of relatively minor importance.

Exercise increases cell metabolism, and a damaged kidney may be overwhelmed with

intermediary and end-products of protein metabolism under certain conditions (when glycogen is not readily available). So exercise may be harmful to kidney and heart. On the other hand, exercise may be of greatest value in quickening the circulation of blood and detoxicating the tissues and body fluids.

Metabolism in general and protein metabolism as a part of it, may be lessened by rest, and the value of rest versus exercise should be carefully judged in the light of the problem of the individual case.

Having thus emphasized the need of a more or less restricted protein ration in the food of a nephritic patient, let us now proceed to the selection of the protein to be offered in the diet. Some assert that certain proteins act as irritants of the kidney, in the sense that they cause an anaphylactic reaction. They assume that hypertension is due to a vascular spasm caused by certain proteins to which the body has become sensitized. They admit the impossibility to point to the offending protein, but believe that by limiting the choice of proteins to a few they have a gambler's chance to exclude the offending protein. So they advocate that patients limit themselves to certain kinds of meat, or that they avoid meat altogether and partake only of certain protein foods, as few as possible in number. Properly exercised, no harm can come from such a procedure, if the restraints thereby placed on the patient do not defeat their object by their very strictness or the impossibility of being carried out successfully. Food must be somewhat varied to be taken with complacency. Restrictions of this kind remind the patient constantly of his illness and produce a very undesirable mental attitude.

The total calories offered in the diet of the nephritic are chosen with the view to supply the essential needs, the basal metabolic requirements in the case of the patient with restricted exercise and slightly more in the case of the patient who may be moderately active. The low caloric intake is offered with the intent to reduce unnecessary body weight, in order to lessen the

load for the overburdened heart, and to ease diaphragmatic breathing. In this process of reducing overweight one must proceed with caution to avoid aggravating the already existing low-grade acidosis.

The treatment and avoidance of acidosis by means of dietary regulation offers another fruitful field for elimination of toxic factors which damage the kidneys and the tissues in general. This can usually be accomplished by meeting the demand for calories chiefly from carbohydrate sources and only to a minor degree from the fats of the diet. The carbohydrates again should be selected mostly from concentrated starches, cereals, bread, fruit, with a fair allowance of vegetables for bulk. Vegetables that can be eaten in the uncooked state and raw fruit have special virtues on account of their higher mineral content and because they are a rich source of vitamins. Sugars, cooked vegetables and cooked fruits are, of course, permitted, but are less beneficial.

The use of salt should be restricted, in severe cases forbidden. The rôle of salt in the causation of hypertension may be controversial, but the value of salt restriction in the treatment of hypertension has been demonstrated by competent observers. Salt restriction in cases of nephritis with edema is, of course, the established procedure. When in renal disease the salt-excreting function of the kidney is reduced or lost, water is retained and edema results. Conversely, when the salt content of the body is lowered, water is liberated and is discharged by the kidneys. The maintenance of the optimum concentration of the salt in the body fluids and the tissues is essential to cell life. By varying the amount of salt we may, therefore, regulate the water content of the body. In hypertension a depletion of the amount of circulating fluid may mean a considerable reduction of the burden placed on the heart. It is probable that salt restriction acts also in other ways beneficial in cases of renal vascular disease.

Total liquids should be restricted to the requirements of actual thirst. Thirst producing condiments should, therefore, be limited to a minimum, along with the re-



striction of salt. A great relief to the heart will follow the adoption of this rule. Thirst is a safer criterion as to the amount of fluid that should be allowed a nephritic than clinical and laboratory tests. To decree arbitrarily that fluids should be restricted to a fixed low amount, or be forced to flush out metabolic waste, means playing with an intricate automatic mechanism of cell life. If the creation of artificial thirst by condiments and salts is avoided, the natural craving for fluids will not be in excess of the actual necessities. In this connection it may be pointed out that the combustion of carbohydrate food ultimately into carbonic acid and water is an intracellular process, and that the water furnished the cell in this manner is of greater value to the cell than water carried to it by the blood stream. The liberal use of starches allows greater restriction in the use of fluids. Nephritics who can secrete only a urine of low specific gravity and whose kidneys have lost the power of concentrating urine, need a larger amount of fluids than others in whom the ability of the kidneys to concentrate is still intact. Thirst will regulate the demands of such patients for fluids very efficiently. To restrict such patients in their fluid intake and perhaps to administer a saline cathartic, invites the occurrence of convulsions. Saline cathartics in such cases are best avoided.

The value of proper posture and proper exercise is hardly appreciated to its full extent. The posture should be erect. The patient should train himself to stand and to walk as if he wished to appear taller. Exercise should be limited to walking. Only those patients who show no signs of cardiac decompensation are allowed any exercise. If the patient is able to walk uphill, carefully, so as not to throw any strain on his heart, and will walk in erect posture, a corrective mechanism will be set in motion that has no mean therapeutic value. Breath-

ing will automatically become more deep, and the diaphragm will make wider excursions, compressing the abdominal organs rhythmically. The venous trunks and the tributaries of the portal vein are emptied more promptly, and the flow of blood in the abdominal organs is quickened. The resultant gain in intestinal tone, improved liver function and the lessened congestion of all the abdominal organs frequently remove complicating factors in the vascular renal complex. Even etiologic factors may be influenced. The enlistment of the mechanism of diaphragmatic breathing to the relief of an overburdened heart should become a routine practice in suitable cases.

Drugs in the treatment of renal disease are used in critical phases and in terminal conditions. Their uses and indications will not be discussed in this paper, which is limited to the main problem of how to favorably influence the course of renal vascular disease.

The answer is summed up as follows: Dietary treatment with low protein, moderately low fat and liberal carbohydrate diet. Total caloric restriction to basal caloric requirements, plus small allowance for exercise. Reduction of excessive body weight. Low salt or none in severe cases. Restriction of liquids to amount required by thirst. Rest in cases of cardiac decompensation. Exercise in suitable cases, limited to walking in erect posture and deep diaphragmatic breathing.

Under this régime the benign form of renal vascular disease is apt to remain benign, and the patient need not experience any hardship by adopting a sane method of living which does not interfere with his comfort, efficiency or happiness. The course of the combination form (glomerulonephritis with sclerosis) is favorably influenced in many ways by the above measures, but the ultimate outcome of this malignant form cannot be altered.

## NEWER THERAPY OF CARDIOVASCULAR RENAL DISEASE.

Discussing the Value of Some Operative Procedures and Drugs in Buerger's Disease, Angina Pectoris, High Blood Pressure, Heart Failure, and Dropsy (of Cardiac and Renal Origin).

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During the past 17 years, I (H. I. G.) have often been confronted in hospital and private practice with cases of various forms of cardiovascular renal conditions that did not respond very well to the usually accepted kinds of treatment. Only too often have we met with cases of general anasarca, cardiac decompensation, hypertension, with and without general angiosclerosis, and with many other annoying symptoms that did not seem to respond to our therapeutic measures. Thoracentesis, paracentesis; venesection and blood transfusion, and intravenous injections of magnesium sulphate (10%, 15-30 c.c.) in hypertension and uremia; high protein feeding with the use of thyroid extract and thyroxin in chronic nephrosis (A. A. Epstein); sodium sulphocyanate (1-5 gr. 3 times a day for hypertension); expuralgin, rectopanbiline—daily enemas of bile; glucose 25%, chloral, benzyl fumarate, watermelon seed, extract of *allium sativum* (garlic), subtonin and anabolin, and spinal puncture (hypertension); Southey tubes (edema), various digitalis preparations (digalen, digitan, digitol, digifortis, digitalis dispert), pilocarpin, strophanthin, ouabain, quinidin sulphate, sodium citrate, caffein-sodium-benzoate, nitroglycerin, sodium nitrate, morphin, atropin, iodides by mouth or by intravenous injection, sajodin (calcii iodobehenate U. S. P.); urea and numerous other diuretics; and salt-free diet have all been tried with varying results. It is because of this, that so many different drugs

and other therapeutic measures have been tried and recommended at different times during the past few years. I will simply attempt, in this paper, to briefly discuss some of these remedies. With some I have had considerable personal experience, both in private and hospital practice; a few I have only had very little opportunity to try out thoroughly and must quote from the reports and experience of others.

I shall, if time permits, touch on the use of ammonium chloride, calcium and potassium chloride, hepatic extract (heparmone), phenobarbital (luminal), ephedrin, alpha-lobelin, verodigen, scillaren, erythrol tetranitrate, Ringer's solution, cymarin, theobromin alkaloid, and its combinations (theocalcin, theominal, theocyl, theobryl), the double salt of sodium mercuri-o-chlorophenoxy-acetate and diethylbarbituric acid in a 10% neutral sterile solution (novasurol), methyl-isopropyl-cyclohexenon in aqueous sodium salicylate solution (homocamfin or "hexeton"), allyl-isopropylbarbituric acid-phenyl-dimethyl dimethylamino-pyrazolon (allonal) and theophyllin or theocin (dimethylxanthin).

### BUERGER'S DISEASE.

The intravenous injections of radium chloride, typhoid vaccine, sodium citrate, and intravenous injections of hypertonic (5%: 150-300 c.c.) salt solution, for the relief of pain in Buerger's disease (thrombo-angiitis obliterans), need only mention.

Amputation has been the usual surgical procedure in this condition, in the presence of gangrene and excessive pain. Now, Roentgen ray therapy has been found to relieve the suffering of some of these patients. Electric light therapy, oven-baking, and other forms of heat and light treatment have been tried. Lumbar sympathetic ganglionectomy has relieved pain and produced an increase in the blood flow of the feet as shown by surface temperature studies and determinations of the rate of heat elimination. George E. Brown, of Rochester, Minnesota, believes that intravenous injections of typhoid vaccine, to produce systemic fever, have been the most successful medical measures for alleviation of pain and increasing cir-



circulation in Buerger's disease. During the past 3 years, in several of my cases sympathectomy has been done, but without very satisfactory results. Adson has stripped the common iliac arteries and removed the second, third and fourth lumbar sympathetic ganglia to block the vasomotor paths of the distal vessels of the feet.

Some believe baking for the improvement of circulation is dangerous, for it may predispose to secondary infection. Ringer's solution given by the duodenal tube in large quantities (6 to 12 quarts daily) over a period of months seemed to ally the disease temporarily. Others have used large quantities of Ringer's solution by hypodermoclysis in conjunction with intravenous injections of 2% sodium citrate solution, together with potassium iodide internally. Allonal and luminal give these patients needed rest and some relief from pain. Arteriovenous anastomosis is to be condemned. Bier's hyperemic suction has given some relief.

Conservative treatment must be carried out first in all cases, because many show improvement and surgical intervention may thus be avoided. Some cases, if studied more carefully will show that a wrong diagnosis was made—and in others a diagnosis made very late. The outlook for ultimate cure in these cases at present is *not good*. Temporary arrest of the disease has been accomplished in many cases but I know of no complete permanent cures.

#### ANGINA PECTORIS.

Schittenhelm and Kappis, in their paper, review 5 different surgical procedures in angina pectoris, all pain abolishing. They recommend that after failure of all internal measures, either extirpation of the superior cervical ganglion or resection of the depressor nerve is indicated. At the Peter Bent Brigham Hospital, a number of patients have been operated on for angina pectoris with satisfactory results. Levine and Newton state that some patients have been strikingly relieved by cervical sympathectomy. Kerr (*Annals Clin. Med.* 4:30, 1925) reports that in 2 cases complete relief and in 1 case partial relief followed resection of the left superior cervical ganglion together with the superior cardiac nerve. Levine and Newton

removed all 3 cervical sympathetic ganglia and the cardiac nerve on the left side in a girl 12 years old, with blood pressure 172/74. Swetlow and Schwartz have relieved 5 patients of severe cardiac pain by paravertebral alcohol injections.

I have found that theominal (theobromin 5 gr. and luminal  $\frac{1}{2}$  gr.) and erythrol tetranitrate ( $\frac{1}{2}$ -1 gr. in tablets) relieves anginal pains. It appears that theobromin acts as a vasodilator and the luminal quiets the patient and has a tendency to lower blood pressure. It has been demonstrated by Gruber, Shackelford and Ecklund (*Arch. Int. Med.*, Sept. 15, 1925) that luminal will lower blood pressure in cases of arterial hypertension. Wiechmann believes luminal has an antispasmodic action upon the blood-vessels. Wearn (*Med. Clinics of North America*, March, 1925), states that one of the striking effects of theobromin is dilatation of the coronary arteries. Some believe theobromin lowers blood pressure by splanchnic dilatation. Erythrol tetranitrate effect is more enduring than that of the nitrites and there does not appear to be any tendency to establishment of a tolerance. Tablets of erythrol tetranitrate retain their full activity for a long time.

Strauss emphasized the value of small doses of luminal with diuretin (theobromin sodium salicylate). Diuretin, even in large doses, has not given me very good results. Theocalcin (calcium theobromin salicylate in  $7\frac{1}{2}$  gr. tablets) may be used instead of diuretin. Theocyl (acetylsalicyl theobromin  $7\frac{1}{2}$  gr. tablets) may also be substituted. Theocyl particularly exerts a favorable effect in cases associated with nephritis with edema and ascites. Theocyl appears to lower the blood pressure promptly, thereby lessening the tension of the vascular system and thus affording relief of the subjective symptoms. The pulse is improved (even with digitalis) as the result, probably, of the widening of the coronary vessels and the better perfusion of the heart with blood. The same may be said for theobryl, a Swiss preparation. Such remedies as just mentioned, and also theocin, theophyllin or theocin-sodium acetate should not be taken on an empty stomach. Theocin, at times, causes

nausea, vomiting, headache and epigastric burning, and therefore should only be given in doses of 3 to 5 gr., four times a day for several days—then it must be stopped for an interval of a few days. Theophyllin is the natural alkaloid, discovered by Kossel in 1888, in tea leaves and possesses marked diuretic properties; theocin is a synthetic reproduction of this alkaloid. These remedies are chiefly used for the removal of dropsy in cases of cardiac and cardiorenal disease.

It is assumed that in all the conditions discussed in this paper the patient has been examined thoroughly for foci of infection, and abnormal blood chemistry, and that existing pathologic factors are to be corrected and, if possible, removed. Dietary measures and particularly restriction in salt and protein intake in renal and hypertensive cases are highly important. Syphilis, diseased teeth, tonsils and sinuses, gall-bladder disease, gastro-intestinal and nervous disorders, must, of course, all receive proper attention.

#### HYPERTENSION.

Removal of foci of infection, treatment of existing lues, kidney disease and vascular sclerosis; endocrine therapy (particularly in women at the climacteric age), hydrotherapy, physical and mental rest, radium emanation, venesection, high frequency, the nitrites, veratrum viride, aconite, iodides, sajodin, neo-arsphenamin, have all been tried, and in many instances with benefit. Recently several newer forms of treatment have been studied. The use of hepatic extract (heparmone), calcium and potassium chloride, luminal, parathyroid and animasa have recently been recommended.

Wallace and Ringer (J. A. M. A., 53:1629, Nov. 13, 1909) in a comparative study of the actions of the nitrites usually prescribed in hypertension, showed that erythrol tetranitrate gave more lasting effect than the others. This was done on normal individuals, and on patients having arteriosclerosis. They remark "It is certain that arteriosclerosis of a high degree does not prevent the nitrate group from exercising its usual action, and, in fact it seems conceivable that only in cases in which the splanchnic vessels are no longer capable of

dilatation will a fall in blood pressure not occur". I have used erythrol tetranitrate (tablet, each  $\frac{1}{2}$  gr.) with good effect in conjunction with theominal. At times I use allonal ( $2\frac{2}{3}$  gr. to  $5\frac{1}{3}$  gr.) with happy results. This relieves the headache promptly, particularly when  $\frac{1}{2}$  gr. tablet of erythrol tetranitrate is also given. Many of these cardiovascular hypertensive cases have frequent attacks of headache, dizziness, and peculiar psychotic episodes. In these patients the use of luminal, or allonal is certainly of great benefit; even when bromides are not given.

Major and Stephenson (John Hopkins Hospital Bull. 35:196) found that calcium chloride alone or combined with potassium chloride abolished the rise in blood pressure produced by guanidin and methyl guanidin. Some of the results obtained by the use of calcium chloride therapy in arterial hypertension were reported in 1914. Further clinical work has been done at the Toronto General Hospital by Addison and Clark. Patients were given from 90 to 180 gr. of calcium chloride a day. All cases studied by these men had an initial systolic pressure of 170 mm. or over; some ranged as high as 262. The diastolic pressures ranged from 84 to 152 and the ages were from 28 to 91. Only those cases were considered as reacting in which the salt reduced the systolic pressure 30 mm. or more and maintained it there, and kept the diastolic pressure 12 mm. or more lower than the initial reading. Of the 45 cases studied by Addison and Clark, 26, or 57.7% reacted with calcium chloride and 6, or 13% with potassium chloride; making a total of 70%. The objectionable feature to the giving of calcium chloride is the gastro-intestinal upset. It produces an inorganic acidosis which must be watched. The use of milk or buttermilk will considerably relieve the gastro-intestinal distress. They concluded that: (1) Calcium and potassium chlorides will produce a decided fall in blood pressure in a large percentage of cases of hypertension with a coincident improvement of the patient's symptoms. (2) Edema will improve and disappear under their action. (3) The treatment must be persisted in for 3 or 4 weeks to get results. (4) The only serious objection is the possibil-



ity of producing symptoms of an inorganic acidosis.

I have used calcium chloride intravenously in a 10% sterile solution with some improvement in a few cases. In cases with marked edema and ascites, the use of calcium chloride did not appear to help very much.

Before the section of Pharmacology and Therapeutics of the A. M. A., in April, 1926, Ralph H. Major, of Kansas City, reported again that methyl guanidin, a normal constituent of the urine, was capable of producing a marked and prolonged elevation in blood pressure in animals and in man.

Major found that certain liver extracts were very potent both in producing and preventing such an experimental hypertension. The liver extract with which Major was working was obtained by a process of alcoholic fractionation and had a nitrogen content of .001%. The presence of histamin, chlorin, and peptone was excluded with a reasonable degree of certainty. The liver extract produces no sharp fall in blood pressure, such as these 3 substances produce, has little effect on normal blood pressure and is not toxic in very large doses. No symptoms of anaphylactic shock are encountered, according to Major. They have treated approximately 100 patients suffering from high blood pressure with this histamin and chlorin free preparation. The results were not good in patients who have suffered from arterial hypertension for a long time and whose range of pressure over a period of years was known; as a rule, in such cases there was little evidence of specific effect. The most striking results were obtained in patients whose hypertension was apparently of brief duration and in whom anatomic alterations had not yet taken place. It is claimed by Major and others that improvement in symptoms has been a very striking feature in many patients even though the blood pressure was not lowered. The evidence in favor of hepatic extract, at present, is far from conclusive. Dr. Orlando H. Petty informs me that the results obtained from the use of hepatic extract have been uncertain and unsatisfactory. He studied its effect on patients in the Phila-

delphia General and the Polyclinic Hospitals of Philadelphia.

Major standardized the liver extract against guanidin and had taken as a temporary unit the amount of depressor substance necessary to neutralize 0.1 mg. of guanidin in an animal weighing 2.5 kilograms.

It appears that for clinical use, in the treatment of hypertension, hepatic extract is not yet to be considered a satisfactory therapeutic agent. Much more study and experimentation must be carried on before the general profession can accept it.

James and Laughton (*Canad. Med. Assoc. Jour.* 15:701-702, July, 1925), MacDonald and Burnett (*Boston Med. Jour.* 194:38-388, March 4, 1926) and Major (*Journal A. M. A.*, 85:252, July 25, 1925) have done considerable work with hepatic extract. Some of Major's patients received hepatic extract every day, some twice daily, and some once a week. The extract was administered intravenously, intramuscularly, and subcutaneously. The effect is more prompt after intravenous injection but is also obtained after intramuscular and subcutaneous injections. Within an hour after injection the blood pressure usually falls from 20 to 50 mm. This fall is usually gradual and not accompanied by any symptoms, although occasionally some dizziness may occur. The fall usually lasts only a few hours or possibly for a day. Major has obtained, in some patients, a fall in blood pressure which persisted for a week or more, after receiving 8 or 10 doses of the extract—particularly in comparatively young persons without evidence of renal damage or arteriosclerosis.

Lilly and Company, through their Research

In a letter to me dated April 3, 1926, Eli Laboratories, state that liver extract (heparmone) for the treatment of essential or idiopathic hypertension is at the present time purely an experimental product. They have not yet released this to the medical profession at large and do not intend to until they are more certain as to the status of the product in the treatment of hypertension. They say, "We must know more about dosage, frequency of dosage, and type of case best suited for treat-

ment before we make general distribution of this product".

H. Griesbach (Giessen: Alfred Topelmann, 1923) attempts to demonstrate the value of animasa, a proprietary extract prepared from blood-vessels, in the treatment of hypertension. A brief discussion of the etiology of hypertension is followed by experiments showing the depressor action of animasa on normal animals and men. Then follow protocols of patients with hypertension treated with the drug. Although some falls in pressure are recorded, the results are not convincing, for no allowance is made for the spontaneous variation in blood pressure, and no diastolic pressures are recored. Further evidence is needed to demonstrate the usefulness of this preparation in the treatment of hypertension.

Animasa does not contain vasodilators, but is said to attack the cause by desensitizing the vessel walls against foreign products of protein present in cases of hypertension and arteriosclerosis. Small doses should first be used in severe kidney cases with hypertension.

Among those who have reported favorable results from its use are Migeod (Bad Tolz), Funck (Köln), Rolf Griesbach (Lübeck), Blumenfeldt and Cohn (Berlin), Witt (N. Y.), H. Griesbach (Giessen), Kärcher, W. Steinbach (Berlin), and Wirtz (Osnabrueck). Carl Funck, of Köln, Germany, (Med. J. & Rec., N. Y., 129:408, Oct. 6, 1926) recommends the use of animasa as a curative and prophylactic remedy in arteriosclerosis.

Animasa is administered in tablet form, by mouth.

With regard to the use of parathyroid hormone in hypertension, I may quote from an editorial in the J. A. M. A. (85:441, 1925) in which it is stated: "In uniformity with what has been observed for other tissue extracts, the purified extracts of the parathyroid cause a slight fall in blood pressure after intravenous injections. Subcutaneous administration, unless massive doses are used, has little or no immediate effect on blood pressure. Hypercalcemia can be induced by the use of the parathyroid hormone even in a fully anesthetized animal. There appears, under any condition,

to be a definite limit to the degree of calcium mobilization possible in the blood, the highest concentration (in the dog) being about 20 mg. per 100 c.c. of blood. The blood phosphorus shows very little fluctuation during the period of calcium increase; but when a marked hypercalcemia is developed the phosphorus may increase progressively. It is thus obvious that an agency of marked and decidedly unique potency has been placed in the hands of the investigator. What the clinician may do with it remains to be seen."

#### HEART FAILURE.

We have all met with cases of heart failure in which the use of the various, active preparations of digitalis such as, digalen, digitan, digifoline, digifortis, strophanthin, and ouabain, used by mouth or by injection have failed to give satisfactory results for some reason or another, particularly when the condition is associated with loss of kidney integrity and the presence of edema and ascites. In some of these cases the blood shows a strongly positive Wassermann reaction. The patients complain of air hunger, extreme shortness of breath, cyanosis, cough, restlessness and insomonia and at times considerable precordial distress. The body is water-logged. These patients become extremely bad during the night; frequently pulmonary edema sets in and the patient is found gasping for breath, with what at first resembles a severe attack of bronchial asthma—really, a "cardiorenal asthma". What shall we do for these patients? We see them only too frequently in the wards of our hospitals. Very many are the cases of this type that I have had occasion to treat in hospital and in private practice during the past 17 years. Often, it seems, relief has been promptly obtained by the administration of oxygen on the so-called instalment plan, allowing the patient to inhale the oxygen for a few minutes every hour until definite relief is obtained. Venesection, of course, is often indicated. The use of homocamfin or methyl-isopropyl-cyclohexanon in sodium salicylate solution (cyclosal or "hexeton") in 2.2 c.c. ampules (10% solution) for intramuscular injection, and 1.2 c.c. ampules (1% solution) for intravenous use,



has, in my hands, given favorable results, particularly when used in conjunction with very small subcutaneous or preferably intramuscular injections of adrenalin chloride 1:1000 solution. Haeberlin recommends subcutaneous injections every hour or so—0.1 to 0.2 c.c. of 1:1000 solution of adrenalin chloride massaged into the tissues—in grave “toxic weakness of the circulation”.

It is very important, of course, to give the patient rest, and an opiate is often indispensable; atropin in large doses often necessary. One or 2 tablets of allonal or 1 gr. of luminal, as indicated, often gives the patient several hours of sound sleep without depressing the heart. As diuretics and cardiac stimulants, I have used theocalcin (theobromin-calcium salicylate) in  $7\frac{1}{2}$  gr. doses and theominal (theobromin gr. 5 and luminal gr.  $\frac{1}{2}$ ). At times small doses of pituitrin are used in conjunction with the small doses of adrenalin to relieve the attacks. Nitroglycerin, 1/100 gr. under the tongue, acts rapidly.

Pratt (J. A. M. A., 87:809, Sept. 11, 1926) discussed cardiac asthma (4 groups), and recommends the use of subcutaneous injection of morphin, bandaging the limbs, bleeding (high blood pressure), caffein sodiobenzoate, epinephrin and amyl nitrate.

With ephedrin I have had no experience but, it seems to have general physiologic effects in man similar to those produced by epinephrin. It has, however, distinct practical advantages over epinephrin because of more prolonged action and the fact that it can be administered effectively by mouth in doses of 50 to 125 mg. It stimulates the heart action and has a tendency to increase the output of urine. T. Grier Miller, of Philadelphia, believes that the widest range of usefulness of ephedrin will be found in the treatment of asthma and of acute circulatory depression (hypotension). Ephedrin is the name given to an active principle isolated by Nagai from an Asiatic drug, Ma Huang (*ephedra vulgaris* var. *Helvetica*), which has been used in the practice of medicine in China for more than 5000 years.

Chen and Schmidt (J. A. M. A., 87:836, Sept. 11, 1926) state that ephedrin as a circu-

latory stimulant is rather a disappointment, and in chronic hypotension and acute circulatory crises is of little or no value.

I have not had any experience with the use of alpha-lobelin (to be given intramuscularly or subcutaneously 3/20 gr. or 1/20 gr. intravenously). It is primarily used in collapse, shock and respiratory failure, and is sold in ampules of the proper dosage.

Verodigen, which is the gitalin constituent of digitalis leaves, was first obtained by Kraft. It slows the pulse, increasing the pulse volume, raises blood pressure and promotes diuresis. When given by mouth it is more rapidly absorbed and its action more promptly developed than is the case with other digitalis constituents; the results of the oral administration of verodigen are often almost as rapid as are those following the intravenous use of such remedies as strophanthin. According to Straub (Deut. med. Woch. 1919, No. 11) the outstanding advantages of this preparation are its very rapid absorption, prompt and uniform action, and good keeping qualities. There is less danger of cumulative effects than with other digitalis preparations. Straub and Krehl report that in cases of cardiac insufficiency with retarded circulation, stasis and dropsy, they usually administer 1/160 to 1/80 gr., 2 or 3 times daily for the first day or two. Thereafter, based upon the reduction of the ventricular beats, the dosage is maintained at the lowest possible size (1/160 gr. twice daily).

I have not used scillaren, cymarin or cardiazol to any extent and therefore cannot report as to their value in cardiac disease. Scillaren, the active principle of squill, was first prepared by Stoll and Sutter in 1921 and represents the total cardio-active glucoside of *urgingia scilla*. It is indicated where digitalis or strophanthin fails, but acts insufficiently or ceases to be effective because of tolerance due to protracted use. The dose is one tablet, 1/128 gr. or 1 c.c. of the solution orally 3 to 4 times daily. Intravenously, a total of 1 c.c. per day.

Cymarin is the active principle of *apocynum cannabinum* in a chemically pure form. It is a cardiac tonic and diuretic and is preferably given intravenously in doses of 1/180 to 1/60.

gr. The dose by mouth is 1/200 gr. gradually increased, if well tolerated by the gastro-intestinal tract, to 1/50 gr. It is made up in ampules 1/60 gr. and in tablets 1/200 gr.

Cardiazol (pentamethylenetetrazol) is reported to be superior to camphor and digitalis in its effect on paralysis or inhibitions of the heart, and is therefore supposedly of value to preserve life in collapse and acute circulatory disorders. The dose is 1½ gr. (in 1 c.c. ampule or in 1½ gr. tablet) 3 or 4 times a day.

Ringer's solution, it seems to me, should be used more often by hypodermoclysis, in cases of cardiac collapse. I shall quote from an editorial recently appearing in *Medical Times*, N. Y., 54:125, May, 1926: "An isolated heart, when supplied with oxygen, will continue to beat spontaneously for a much longer time in Ringer's solution, which closely resembles the blood serum in constitution, than it will in physiologic salt solution. This is a laboratory axiom. Ringer's solution is a physiologic solution used for perfusing the heart of the frog. It contains sodium chloride, 0.650; potassium chloride, 0.014; calcium chloride, 0.012; sodium bicarbonate, 0.020; monosodium phosphate, 0.001 (glucose, 0.200); and water to 100. Another formula is: sodium chloride, 1.8; calcium chloride, 0.048; potassium chloride, 0.084; sodium bicarbonate, 0.06; distilled water, 200. Still another is: sodium chloride, 229; magnesium chloride, 25¾ gr.; potassium chloride, 3¾ gr.; magnesium sulphate, 13 gr.; calcium sulphate, 8⅝ gr.; distilled water, 1 pint."

Pearce and Macleod, in their "Fundamentals of Human Physiology", summarize a very interesting theory concerning the cause of the heart beat: "It will be remembered that the blood contains salts of sodium, potassium and calcium in solution. If these salts are replaced by other nonpoisonous salts in the same concentration as the salts removed, the heart will not beat. If the heart is perfused with a solution of sodium chloride alone, the beat becomes very weak and finally stops. If however, a small amount of calcium and potassium salts be added to the sodium chloride solution, the heart will again begin to beat, but it stops after a while in a state of relaxation, or dia-

stole, if calcium chloride in excess be added if an excess of potassium salts be added. These experiments suggest that the salts of the blood offer a solution to the problem of the cause of the heart beat, the potassium favoring relaxation, and the calcium contraction. If the proper balance of these salts is present in the blood, it is conceivable that a regular sequence of contraction and relaxation of cardiac muscle will take place because of the action of the salts.

Here, it seems to us, is a key to a new therapy in the presence of heart failure. Why should we not avail ourselves of this physiologic means of restoring tone and vigor to an exhausted organ instead of depending almost wholly upon toxic agents, in other words, drugs? Ringer's solution, by hypodermoclysis, would undoubtedly fulfill the clinical indications in cardiac decomposition and other exhaustion states with a reasonable approach to adequacy. Indeed, in the light of laboratory truths, it would be stupid not to employ this resource. It is all very well to insist that a well-balanced diet supplies a sufficiency of inorganic mineral salts of the character under discussion. How many American diets are well-balanced? How many adults drink milk and make a point of eating green vegetables? These cardiac cases frequently reach us in bad shape after years of calcium starvation. Their hearts need calcium as a rickety baby needs cod liver oil, and then, forsooth, we solemnly proceed to digitalize them. The good record of Ringer's solution in the treatment of shock and hemorrhage has presumably been due, in very large part, to its effect on the heart. A fair trial still awaits Ringer's solution in cardiac cases".

Barium chloride was used by Cohn and Levine with prompt relief in 3 cases of complete heart block with frequent attacks of syncope and convulsions not helped by usual procedures, including adrenalin, given by mouth 30 mg. 3 times a day. The barium increased the irritability of the ventricles. Epinephrin is also useful in syncopal attacks in Stokes-Adams syndrome.

#### EDEMA.

In cases of marked edema, especially of the lower extremities, Rowntree and Hench



have recommended that the patient be kept in the "jack-knife" position, with the head and feet elevated, so as to cause the fluid to drain from the extremities and to collect in the abdominal cavity, on which paracentesis can be performed.

Rowntree has emphasized the importance of elevating the head of patients with massive edema to prevent cerebral edema, thus avoiding possible coma and convulsions. Hench warns against removal of foci of infection in cases of arteriosclerotic nephritis and in patients heavily waterlogged from nephrosis or diffuse glomerular nephritis. Hench (*Jour. A. M. A.*, July 3, 1926, p. 8-14, 87, No. 1) discusses various types of nephritis and mentions the use of water, intravenous and rectal injections of glucose solution, the use of calcium chloride, ammonium chloride and merbaphen (novasurol) in the treatment of nephritis.

I might add, at this time, that in cases of uremia and hypertension with convulsions, I have used hypertonic magnesium sulphate intravenously, in doses of from 10 to 20 c.c. of a 10% solution. It appears that this treatment does control the convulsions and causes some reduction of blood pressure and edema, increasing the urinary output. McNeile and Vruwink, of Los Angeles, (*J. A. M. A.*, 87:236, July 24, 1926) have obtained similar favorable results in the treatment of pre-eclampsia and eclampsia. The use of calcium chloride intravenously is specific for any respiratory failure or discomfort that may occur from epsom salt injection. Recently, in the case of a woman aged 38, with a systolic blood pressure of 260 and a diastolic of 160, with uremia and convulsions, I obtained considerable improvement from the use of intravenous injections of magnesium sulphate (10%), glucose and bicarbonate of soda solution, by enteroclysis, theominal by mouth as soon as patient was able to swallow, and hot wet packs. Venesection was done twice. Blood transfusion was not necessary, and the patient only received, during a serious attack of a week's duration, one hypodermic of  $\frac{1}{4}$  gr. morphin. I believe that the intravenous magnesium sulphate injection had a great deal to do with her improvement.

Glucose solution (25%) may be given intravenously instead of by rectum, in quantities varying from 150 to 500 c.c.

#### DROPSY.

Novasurol.—In the spring and summer of 1924, I began the use of novasurol, a complex synthetic mercurial preparation, being a double salt of sodium mercurio-chlorphenoxy-acetate and diethylbarbituric acid. It contains 33.9% of mercury, and is employed only in a 10% neutral sterile solution. It may be administered intramuscularly or intravenously. Sometimes the intramuscular injection is painful and Marvin, of Yale, has reported abscesses, following necrosis of tissue, occurring some days after intramuscular injections. This distressing complication can be avoided by intravenous injection. However, sometimes this gives rise to a too rapid absorption of the mercury and results in stomatitis and colitis.

After the introduction of this drug as an antisiphilitic remedy in Germany, by Heilig, (1920), Poechen and Saxl found that the injection of this soluble mercurial compound in cases of decompensated syphilitic aortic lesions was followed by a rapid and marked increase of urine. It was then demonstrated that it is a very powerful diuretic and produced profuse diuresis even in cases in which digitalis, strophanthus and the purine derivatives had failed. This effect is probably due to a direct action upon the tissues, an abstraction of water and sodium chloride from their colloidal combination. Nonnenbruch, Saxl, Heilig, Brunn, Kulcke, Bohn, Eppinger, Hegler, Blum, Schmidt and others have experimented considerably with this drug. Marvin finds that novasurol usually increases excretion of chloride and water—that diuresis begins within 2 to 4 hours, reaching its maximum diuretic effect at the end of 8 hours, and that this may continue for 24 hours. It appears to have no effect on inflammatory exudates. I have seen severe stomatitis occur in an adult, male, ward patient, (with bad mouth infection) after one-half ampule, and severe diarrhea (colitis) and stomatitis in another, female, ward patient, after one ampule. In both of these cases, however, marked diuresis occurred and the ascites

and general subcutaneous edema in the case of the woman diminished rapidly. In none of our cases have we had serious complications, collapse, abscesses, or other very prolonged distressing symptoms. It is better to start with a smaller dose—say one-half ampule, and then 24 or 48 hours later, if no symptoms of mercurialism appear, a whole ampule may be given. The next dose should not, as a rule, be given until after an interval of 3 days unless the edema be extreme and diuresis not very marked. After using this mercurial preparation for 2 years, I can state that it is a most active diuretic, particularly useful in dropsical conditions following heart failure (in adults) in cases of arteriosclerosis, coronary disease (with or without angina), hypertension and syphilis. I have never seen any serious damage to the kidneys follow its use even in cases with a long standing mild grade of nephritis. It should not be used in chronic cases having acute exacerbations, or in cases of acute nephritis, nor, in the presence of serious chronic kidney disease with marked organic changes in the glomeruli and tubules. Marked albuminuria (low specific gravity), many granular casts and many red blood cells, if present in the urine, are positive contraindications to its use. The administration of 20 to 30 gr. of calcium chloride or of ammonium chloride 3 or 4 times a day greatly increased the diuretic effect of the novasurol in many cases.

Keith, Barrier and Whelan (J. A. M. A., Sept. 12, 1925) used this joint ammonium chloride and novasurol treatment in 11 of the 12 cases of nephritis with edema studied by them. The ages of the patient varied from 9 to 69 years. Symptoms of acidosis (because of the ammonium chloride) occurred in only a single instance. In most of their cases the immediate results were very satisfactory. Crawford, Hamilton, and MacIntosh noted decided improvement in the clinical condition of 8 patients suffering from severe heart failure and who were not helped by digitalis, theocin and diuretin. In these cases diuresis began in the first 3 hours, reached its height in 6 to 9 hours, and terminated in 24 hours. They found no evidence of any damage to the

kidneys. Gamble, Blackfan and Hamilton attribute the diuretic action of ammonium sulphate, ammonium chloride and calcium chloride to the increased acidity of the bodily fluids demonstrable in the blood plasma and an increased excretion of the fixed base in the urine.

Where severe mercurialism occurs, sodium thiosulphate in fresh sterile solution intravenously in doses of 0.3-0.6 gm. (in 10% sterile aqueous solution) may cause rapid improvement, as in arsenical poisoning.

#### SUMMARY AND CONCLUSIONS.

(1) Attempt was made in this paper to mention and emphasize some drugs that may be of use in cardiovascular renal disease.

(2) From a thorough study of the literature, it would appear that while operative procedures for the relief of angina pectoris and thrombo-angiitis obliterans have, at times, given apparently satisfactory results, these measures better be resorted to very hesitatingly and only after all other conservative medical means have failed. Sir James Mackenzie questioned the advisability of removing a danger signal whose absence may result direly. Pain notifies the patient when the heart is being overworked and forces the victim to stop all exertion, thus acting as a protective measure. Mackenzie states that angina is still a matter for vague speculation and that drastic operative measures for such a little known condition does not rebound to the credit of medicine.

(3) The use of novasurol in cases of marked edema and ascites of cardiac (arteriosclerotic and hypertensive, congestive heart failure) and cardiorenal origin has given favorable results in a considerable number of cases, making tapping of the abdomen unnecessary. The synthetic complex mercurial compound salyrgan seems to have similar effect on edema and ascites.

(4) It appears that novasurol gives better results when ammonium chloride or calcium chloride is administered at the same time. Novasurol is more particularly useful in cases of latent tertiary lues with cardiac insufficiency than theocin or theobromin.

(5) The further use in cardiac and cardio-



renal conditions of such remedies as homocamfin or cyclosal (methyl-isopropyl-cyclohexenon in aqueous sodium salicylate solution), theocalcin, allyltheobromin (theobryl), theominal, theocin, theobromin luminal, scilaren, allonal (allyl-isopropyl-barbituric acid-phenyl-dimethyl dimethylamino-pyrazolon), and verodigen should be continued and encouraged.

(6) Finally, it must be remembered that it is manifestly impossible by any means of treatment to remove organic changes occurring in cardiovascular renal disease. Therefore, avoid the use of too many remedies. Avoid meddlesome therapeutics and a multiplicity of drugs. One must agree with Sir James Mackenzie when he says: "To the earnest student of medicine the contemplation of the present day knowledge of therapeutics cannot but bring a sense of humiliation. Notwithstanding the advances that have been made in all departments of medicine, therapeutics is still mainly empiric, and there seems little prospect at present of it being otherwise. The reason for this state of things is not due to any individual but merely to the fact that medicine has not advanced far enough to know what steps to take to render therapeutics rational." One must understand the nature of the condition to be treated and know whether the remedial agents employed in treatment are capable of modifying the existing pathologic state.

In speaking of angina pectoris, Mackenzie very eloquently says that "If these people who profess to be able to remove changes that induce angina pectoris will realize that they are of the same nature as the attenuation of the skin in old age, the tortuous and thickened radial arteries and the arcus senilis, and even the grey hairs, and if their remedies will restore the skin to the condition of youth, straighten the tortuous arteries and soften the hardened vessel, and dispel the arcus senilis, then they may claim to remove the condition that produces angina pectoris".

(7) It appears that the most active diuretic drugs in cardiac failure (of the arteries sclerotic hypertensive or nonhypertensive types of congestive heart disease), are:—

(a) Novasurol with ammonium chloride;  
(b) theocin (theophyllin) or soluble theocin-

sodium-acetate; (c) theobromin and its salts and combinations (theobryl, theocyl, theocalcin, etc.) These remedies do not seem to act as well in general anasarca of rheumatic and syphilitic heart disease, as in dropsical conditions due to heart failure associated with arteriosclerosis with or without high blood pressure (degenerative types of cardiovascular disease). I have, however, seen almost remarkable improvement, with rapid loss of weight, in edematous patients with decompensated mitral and aortic disease, following the use of these remedies after digitalis therapy and rest in bed had completely failed.

(1) There is still much to learn concerning the etiology of hypertension and kidney insufficiency. I shall refer you to the work of Anderson, who recently (*Experimental Renal Insufficiency—Arch. Int. Med.* 37:297, March, 1926) emphasized the fact that the real cause of progressive development of renal insufficiency in chronic nephritis is not clear. Carter, Howe and Mason, Bell, Day, Christian, Rosenow, Newburgh, and many others have suggested different possibilities as the explanation for the progressive damage to the kidney integrity. Repeated infections, or irritation from food substances or overactivity, etc., have all been suggested.

An editorial of the J. A. M. A. (June 5, 1926) says—"To what extent diets unusually rich in protein may actually induce detrimental conditions, must still be regarded as highly debatable."

Anderson's studies have shown that hypertension is not caused in rabbits by renal insufficiency per se, nor by prolonged retention of creatinin and urea in the blood. As is well known, in our cases of essential hypertension blood chemistry is normal for years.

The Editorial (J. A. M. A., June 5, 1926, p. 1770-1771) concludes that—"the reference of high blood pressure to the concentration of the usual blood metabolites must still be subject to large reserve of statement and to open-mindedness". Now, Bordley and Baker (*Bull. Johns Hopkins Hosp.*, 38,320, April, 1926) tentatively conclude that there is at least an association between persistent hypertension and arteriosclerosis of the vessels supplying the brain stem.

Anrep and Starling, of London, Proc. Roy. Soc., London, B. 97:463, 1925) demonstrated that a reduction in the amount of blood reaching the part of the brain concerned with vaso-motor control brings about a compensatory rise in the systemic arterial pressure.

Bordley and Baker have found arteriosclerosis in the medulla oblongata without exception in man in cases with a history of hypertension.

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#### DISCUSSION.

**Dr. G. H. Lathrope** (Morristown): It is very difficult for one to add anything to the discussion of the treatment of severe types of cardiovascular renal diseases, after listening to four such exhaustive papers as we have heard here this afternoon, and coming from men who have made a study of them such as these gentlemen have. I can't help but feel that there is one phase of the subject which is of considerable importance to the general practitioner that was not mentioned more than in passing, but it was mentioned by each one. I refer to the relationship of focal infection to these heart, artery and kidney cases.

That is of particular importance from the standpoint of prophylaxis of this sort of thing, and I think that that part of it ought to be emphasized. In our health examinations, we are constantly picking up people with focal infections of one kind or another. It is also of importance in the early cases of myocardial damage, of kidney damage, and the early cases of hypertension that have been going on only a few months or perhaps for a year.

I was particularly interested in studying this matter for a paper to be presented before the Southern Medical Association two years ago, and was very much surprised in going over between 100 and 150 cardiovascular cases to find that over 70 per cent of them had bad infections in the mouth. I took simply the ones that had bad teeth, excluding the question of tonsils, sinuses, gall-bladders, prostates, and so on.

Again, in looking over cases that had been labeled "focal infection" primarily, I found that a large percentage of them, over 60 per cent, showed lesions of the heart, arteries or kidneys. In going over those cases carefully we found a few (a very few, to be sure) cases which had had apparently definite damage of myocardium, or hypertension, which had cleared up entirely after the removal of focal infections without any other remedial measures being applied.

The great mistake that we all of us make in looking at these cases is our proneness to regard them as cases of heart disease, cases of hypertension, and cases of kidney disease, forgetting the individual; and a great many of these cases go along categorically labeled as valvular disease or

myocarditis or one thing or another, and are in the hands of doctors for several years without having had a thorough overhauling. They should be overhauled from head to foot, and I want to insist upon just one thing which I have spoken of before in discussions of this same subject, and that is that no case of cardiovascular or of renal disease can be said to have been thoroughly studied, or to have had every possible remedial measure applied, until every possible source of infection in that patient's body has been hunted out and, if possible, removed.

**Dr. A. E. Jaffin** (Jersey City): Mr. Chairman, the subject is one which is difficult to discuss because of its peculiarly individualistic nature. We must approach it from the angles of cardiac, cerebral and renal situations, and these have been handled as well as is possible in short papers before this audience. It is not my purpose to discuss the subject in general but whatever little one may add therapeutically which may apply in an individual case may perhaps be worth while.

**Dr. Goldstein** recommended very highly novasurol—a drug with which I have not had a large experience, perhaps because of the extreme precautions that have been emphasized, and I should like very much when he closes the discussion to have him mention whether he has used the domestic or the imported preparation. The criticisms that I have heard, and which I took on good authority, were that the imported preparation was very effective but very toxic and that the domestic preparation was not toxic but very ineffective, and the few experiences I have had with the latter have rather confirmed that information. So that when salyrgan appeared and I was informed that it was not as toxic, I began to use it, and I should like to report here, for the benefit of those who perhaps haven't used it, that in no case have I had any untoward results even where there has been moderate nitrogen retention and considerable renal impairment; in no case, as I say, have I had any unfavorable results, but very gratifying diuresis, running as high as four or five liters, with considerable relief and comfort, and I might say in one case an actual prolongation of life.

**Dr. Philip Marvel** (Atlantic City): Mr. President, I can add very little, if anything, except possibly that the matter of rest in all these cases might be emphasized even more than either of the speakers did emphasize it. Whether the disturbance in the individual be from a toxic state or from a mechanical state, rest is imperative. In all of our activities, we are inclined to give emphasis to the necessity of rest. If it is so in our activities and in our daily vocations, is it not of more importance that we emphasize the advantage and need of rest when disease is undermining the economic forces of the body?

**Dr. J. Finley Bell** (Englewood): Mr. Chairman, I would just like to make a reference to a paragraph in Dr. Allen's paper, in which he emphasized the question of functional rest which, of course, is obligatory, but correlated with that should go general bodily rest. He mentioned the protein ration of about 32 grams per kilo of weight. Evidently, if that is the maximum amount of protein that can be taken care of by a pair of crippled kidneys, they are working just as hard as normal kidneys would to take care of a much larger amount of protein; it would then seem that the bodily rest ought to be graduated along with the functional rest; that is, the general bodily rest should be reduced in the same proportion.



## In Memoriam

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FISCHER, Armin, of 25 Hillside Avenue, Newark, died on August 22, 1926, of cerebral hemorrhage. The end came with no preliminary warnings, he having been busy at his professional work to the last.

The doctor was born 72 years ago in Szernere, Hungary, and graduated in medicine from the Medical School of Budapest, and there served in St. Rochus' Hospital. In 1889, Dr. Fisher came to the United States and began practice in New York City but removed to Newark in 1902.

The writer well remembers that Dr. Fischer came before the Essex County Medical Society for the examination necessary to allow him to obtain a license to practice in New Jersey. This examination was oral and publicly at a society meeting. Needless to say the doctor successfully passed the examination and was duly licensed. So far as the writer is aware, this was the last time the society acted in this capacity, and under the new and present charter such authority has been relinquished.

Doctor Fischer was energetic in his efforts to improve the conditions of the working class and was prominent in the movement which resulted in the founding of Beth Israel Hospital, of which he became the first president. He had served as a Health Commissioner of New Jersey, and had been Chairman of the Public Health Educational Committee of the Essex County Society.

He was an earnest worker and kept up his interest in general medicine and society work, and at the last Annual Meeting of the State Society discussed with the writer his early experiences in Newark.

Earnest and conscientious men are always remembered and it will be long before the memory of Dr. Fischer passes from his older friends who still continue at their posts.

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GREEN, Whitfield A., died suddenly Sunday, September 5, 1926, at his home in Chester, New Jersey. He has been in failing health for some time, but was able to be around. Dr. Green was born at Succasunna, March 13, 1848, a son of Mr. and Mrs. Reuben Green. He was educated in the public school, Chester Institute and Jefferson Medical College, Philadelphia, from

which school he acquired his medical degree in 1868. In the fall of that year he took over the practice of Dr. Reilly of Succasunna.

Dr. Green was married October 11, 1869, to Miss Emma M. Boell of Succasunna. In the spring of 1871 he located in Chester and had lived here since. Mrs. Green died in 1923. Dr. Green was a member of the Masons since 1870. He was past master of Prospect Lodge, of Chester, and secretary, which office he had held for 25 years. He also was a member of Madison Chapter, R. A. M., of Morristown, and Ods de St. Amana Commandery, also of Morristown.

Dr. Green is survived by 3 sons, Frederick R. Green, at home; Alonzo P. Green, Postmaster of Chester, and Rev. Charles Chester Green, of Wakefield, Kansas; also by a sister, Mrs. Sarah M. Reeve, of Succasunna.

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TETREAULT, Francis J. E., 66 years of age, died of diabetes at his home, 195 Main Street, Orange, New Jersey. Born in St. Pie, Quebec, January 29, 1860, the son of J. A. O. and Ellen McNamee Tetreault, he was educated at St. Hyacinthe's College and received his medical degree from Bishop's College, Montreal. He was keenly interested in public health and held several important public official positions.

Several years ago Dr. Tetreault, who had been examining physician for the Catholic Benevolent Legion and other societies, became actively interested in fraternal insurance. He organized several councils of the Improved Order Heptasophs and later was national organizer of the Golden Star Fraternity, which had its headquarters in this city. From these connections he organized an insurance brokerage business and for some time he had not been in active medical practice, except for a few old patients.

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UNDERWOOD, Charles F., 330 Mt. Prospect Avenue, Newark, died October 19, 1926, after an illness of about one month.

Dr. Underwood was born in Newark, obtained his early education from Williams College, and graduated in medicine at Bellevue Hospital Medical School. He had practiced continuously in his native city until this recent illness, when he was approaching his seventy-eight birthday.

Dr. Underwood is survived by 2 daughters and 3 sons: Mrs. J. Ralph Van Dyne, of Newark; Mrs. J. P. Schureman, of New Brunswick; Charles Underwood, of Plainfield; E. Roger Underwood, of Elizabeth; and Kenneth Underwood, of Bloomfield.



# JOURNAL OF THE MEDICAL SOCIETY OF NEW JERSEY

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Each member of the State Society is entitled to receive a copy of the JOURNAL every month. Any member failing to receive the paper will confer a favor by notifying the Chairman of the Publication Committee of the fact.

NOTE.—The transaction of business will be expedited, and prompt attention secured if,—

All papers, news items, reports for publication and any matters of medical or scientific interest, are sent direct to THE EDITOR, Atlantic City, N. J.

All communications relating to reprints, subscriptions, extra copies of the JOURNAL, books for review, advertisements, or any matter pertaining to the business management of the JOURNAL are sent direct to THE CHAIRMAN OF THE PUBLICATION COMMITTEE, (address above), Newark, N. J.

## CLASSIFICATION OF MEMBERS.

Returns of the "questionnaire" have been fairly satisfactory to date but we are a long way from having received as many as are desired. Have you taken your's from the October Journal? If not, please do so at once and, after filling in the information called for, return it to the Editor.

## GROUP LIFE, HEALTH AND ACCIDENT INSURANCE.

Once more, permit us to direct your attention to the importance of giving this subject immediate consideration. We are informed by the Chairman of the Special Committee carrying on this work that the response by votes of the county societies has been most encouraging but that individual members have not been prompt in appending their signatures "on the dotted line". While a very large number of members have filed applications and forwarded their checks, we are still short of the 75% necessary to put the plan into effect.

In a letter published in this issue of the Journal, Dr. Pinneo explains that his committee has secured an extension of the time originally allowed for completion of the canvass of members, and that you are given a final chance—until November 30—to participate in this group movement.

It is always difficult to secure complete co-operation of a large group of individuals; extremely difficult to get 75% of the members of any large organization to act individually upon any question. Where the possible benefits from such action are clearly demonstrable

one would expect reasonably quick results, but they do not always follow; even while recognizing these possible personal benefits, we are too prone to postpone definite action. One of the unfortunate consequences of delay, in an instance of this sort, where a definite percentage of the entire group must act within a specified time, is that our own inertia may deprive others of full enjoyment of the privileges offered.

The Medical Society of New Jersey is today profiting by one striking example of the advantages of group action. In our special medical defense insurance policy we have the best protection obtainable by medical men anywhere in this country, and at the lowest cost price. In the life, health and accident insurance under consideration, we are again, through group action, able to secure policies of exceptional character and at rates exceptionally low. As individuals, you could not procure such protection in your professional work nor such protection of life and health at such small expense. Through coöperative action, joining with fellow units to secure the advantages and force of the mass, you can secure these personal benefits.

The response to this campaign will be in some measure a test of the profession's ability to coöperate. It has been shown by experience that we can work together harmoniously, that we can unite in action to serve the public, that we can act together for protection against the maligner; it remains to be seen whether we can mass a sufficient percentage of our strength to effect personal benefits.

## AUTOMOBILE INSIGNIA.

In the Journals of July and August we invited attention to the request of the state Commissioner of Motor Vehicles that all our members avail themselves of his offer to supply a special insignia for their automobiles. Visiting some of the County Society meetings during the past month we learned that there are several good reasons why members have not responded enthusiastically to that request. It has been stated on several occasions that vehicles other than those owned or driven by physicians are using the insignia referred to. In some districts special locally recognized insignia have been adopted and been in use for some time. In a number of the counties the A. M. A. special emblem has been adopted and purchased in quantity. The advantages attending wide-spread, if not universal, acceptance of this nationally distinctive emblem would seem to justify the wish to retain it and have it recognized by the New Jersey authorities.

At the recent Newark meeting of the Essex County Society a member inquired whether the Commissioner would insist upon his own departmental device, to the exclusion of all others, or would continue to recognize the A. M. A. marker. The Executive Secretary called upon the Commissioner recently, saw his Deputy, explained the problem confronting different groups of our members, and asked for an answer to the above specific inquiry. The following letter from Mr. Dill will doubtless help to clear away the clouds:

Trenton, October 19, 1926.

My dear Dr. Reik:

Referring to your call at this office today, please be advised that the Motor Vehicle Department of New Jersey, at the request of the State Medical Board, were pleased to have made up for the use of Medical Doctors a special insignia, the fee for which is \$1.00, and the same may be secured upon application to the Trenton office.

The particular insignia issued by this department corresponds in color scheme with the plates issued for the current year, and, in other words, should be renewed each year if the same are to be recognized.

In reference to your inquiry as to whether we will recognize insignia issued by other than department, let me impress upon you that we do not compel the Doctors to secure this insignia but rather are issuing them because of their solicitude in the matter. We, of course, do not object to the use of any insignia which your members use and which are put out by your Medical Society.

Yours very truly,  
(signed) Wm. L. Dill.

## ACCIDENTAL DROWNING.

New Jersey enjoys a deservedly high reputation for the attractiveness of her summer resorts on seashore, river and lake, and it has been a pleasure in traveling over the state this summer to observe the increasingly high percentage of boys and girls capable of swimming. At the ocean resorts, particularly, a large number of children under 8 years of age were learning to swim or actually demonstrating that they could do so. This is interesting not alone as indicating the spread of athletic exercises to aquatic sports, but as a measure looking toward the preservation of life. More than 1500 persons have drowned in New Jersey during the past 5 years; most of them while in the pursuit of healthful recreation. Many of these deaths might have been prevented and would have been had the individuals known how to swim.

It is estimated that about one-third of these deaths from drowning occurred among persons working on or near the water, some being due to shock caused by falling into icy waters in winter, but by far the greater number occurred among pleasure seekers many of whom were children without a protective sense of their danger.

It seems to us, therefore, worth noticing that parents are becoming convinced that their children should be taught to swim. The old dictum forbidding approach to the water is entirely out of date and every child should be encouraged to learn this useful function. There is abundant opportunity for all to learn this simple art since public baths, swimming pools in school buildings, and the pools maintained by many social and religious organizations, are becoming more numerous each year.



## Medical Ethics

### The Devil.

It is a fashionable idea that the devil is dead. This is a mistake. Yes, his forked tail and his horns may have passed with his fire and brimstone; yet he is today a very living presence. Was he evolved out of chaos? None can say when he was born. He came as early as the spirit of man. Just as surely as all germ life has its inherent danger of destruction, so has man, with all his immortality, the inevitable accompaniment of that unseen but ever potent negation and force of evil is always exerting its insidious power to wreck his godliness, and to bring upon him sin, sickness and misery. *This is the devil.*

As night follows day, war peace, ugliness beauty, so woe accompanies joy. Pain follows comfort and evil gives place to good. The God spirit has its antithesis in the devil. Why is this so? It is idle to speculate. It is a fact.

The history of all time attests that evil always has existed on earth since the beginning of man. No history of any race is without its evil page. In the records of the most primitive people we always find belief in a power of darkness, occult evil, impending danger and destruction, a demoniacal essence, for demonology always accompanies theology. Certain peoples even went so far as to worship the devil. All races, all peoples, at all times have worshipped a Godhead. This might be disguised as a Sun God. Some races made fire its Godhead, or that indescribable attribute called beauty arising at last to the Great Almighty. So all existent history of existing spirit life has recognized the existing spirit of the devil.

The very name of the devil is impressed into the nomenclature and the literature, the slang and the very adjectives of all peoples. If one is bad, one "acts like the devil". We even can have a "devilish good time". This one may have a "devil of a temper". Even a member of the fair sex can have the "beauty of the devil". Often, when we refer to the residence of the devil, we are attempting to make more emphatic our speech. If one uses this expression, he may or may not be admired according to his habits or his company. All this is included in our dictionaries, in our language.

Now just as sure as the devil survives, just so sure does his power and his influence persists in the whole universe and in all our lives. All literature from the early classics, the Bible, the poems of Milton, and Goethe, and other poets, the literature of writers

and intellectuals, the stories of Robert Louis Stevenson and others; these all have interested, entertained and instructed us with the fame of the devil, his powers and his achievements. There is no escape. We know ourselves. If we are honest, we confess honestly to the duality of our own natures.

But what is the good of dwelling on so unpleasant a subject? There are moral reasons entirely aside from the psychologic. If we remember these things, we can better avoid the shoals and the rocks besetting our voyage, and we can adjust ourselves to our environment, we can better our relations to our fellow man.

We all acknowledge the influence of heredity, and we imagine that the story in the Bible of the man who was possessed of the devil is a psychologic expression of the lack of self control. If this deficiency has been handed down to us by our own fathers and we are driven like the swine into the sea, should not this fact be recognized by our penologists? Should not the whole question of forgiveness of sin, like as the Master said, "Father, forgive them, for they know not what they do", be remembered by us when we deal with temptation, sin and disease? Who knows the human soul? Who knows the influences of good and evil that are striving to build it up or pull it down? Is it not more difficult for some to do right than for others? The temptation to do evil, like the temptation of drink, is different in different natures. It is no virtue for one to refrain from drink, theft, lust, or other evil. It may require effort and be little credit for one man to keep the Decalogue. It is otherwise with one suffering from an "inferior complex". But we must keep our own house in order and see that in ourselves we have not too much of the devil and too little of the Spirit of God.

## Esthetics

### Pygmalion—The Doctor of the Future.

The "Today and Tomorrow Series", published by E. P. Dutton and Company, was recently embellished by a very interesting booklet, under the above title, from the pen of R. McNair Wilson, M.B., Ch.B. Written ostensibly for the general, nonprofessional reader, we are inclined to think it intended rather for the eye and the mind of the scientific medical practitioner; certainly the doctrine set forth in these pages is of greater concern to the physician, of greater interest and deeper import to the practicing healer, and, perhaps, is more needed today by this

particular group of possible readers. The ever increasing number of new medical "cults", the rapid succession of "new schools" of mental therapy or of alleged curative manipulations, and the avidity with which a large percentage of the supposedly intelligent portion of the population flock to the standards of these false gods, must make the serious minded scientifically trained physician—if he be at all introspective—ask himself occasionally whether and to what extent he may be personally responsible for the appearance and temporary reign of these medical fads. The discoveries in the field of true medical science during the past century have been marvelous; the successful application of this scientific knowledge to the cure and to the prevention of disease has been equally striking. No "cult" or "pathy" has contributed a single new discovery to any branch of science; none has done anything toward the elimination of any disease; the full measure of success attained by any of them rests upon a reported few "cures" of individual cases of illness—cures readily explained on the basis of knowledge long in the possession of and more or less constantly used by members of the regular medical profession. And yet, every year thousands of sick persons leave the care and guidance of the highly trained physicians to seek advice and treatment by the poorly trained, poorly educated but blatant pretenders. Why?

There are many factors to be considered in seeking an answer to that question; too many, indeed, to permit of a full discussion here. One very important factor underlies the theme presented by Dr. Wilson. In the development of scientific medicine it has become difficult for any physician to master and apply all the knowledge pertaining to the healing art. The technic of practice has changed wonderfully in the past 20 years. The making of an accurate diagnosis, calling as it often does for elaborate technical investigations, laboratory studies and observation of physiologic reactions, is time consuming to a terrible degree. Proper treatment, likewise, now very frequently requires detailed attention that not only uses up another large portion of his time but through its varied and technical character, taxes the skill and ingenuity of the physician. One does not decry these modern methods of scientific accuracy; far from it; they must be accepted and employed wherever essential. But, is it not possible that in his effort to comply with the requirements of *science* the physician sometimes overlooks the importance of the *humanities*? The hu-

man being—despite certain similarities and resemblances—is not a piece of machinery, in the sense that a locomotive or a carpet loom is, and does not respond to either man-made or nature's laws with mathematic precision. Medicine, therefore, is not an exact science; there is much of art in its successful practice. And, practically speaking, it is this which Wilson asks us to bear in mind at all times.

Beginning with a consideration of symptomatology, he challenges the general statement that "a symptom is a sign of disease", and proceeds to explain the real import of symptoms. "This belief is so universal, and contains, moreover, so large a measure of truth, that the bare suggestion that it may not represent the whole truth is apt to seem ridiculous on the face of it. That disease can only be apprehended, in the first instance, by a careful search for the symptoms it produces, is a truism. It does not, however, follow from this that symptoms (such as pain or breathlessness) are *direct* consequences of disease. They may, on the contrary, be *indirect* consequences, and it is further possible that this distinction, if established, may turn out to be of a fundamental kind".

When considering symptoms with a view to relieving a patient of his complaints it becomes necessary to know how a given symptom arose and what it indicates.

"For example, a man suffers from pain in the stomach. If we say that a *symptom is a sign of disease*, our attention will necessarily be directed to the organ showing the symptom, and we will administer drugs tending to reduce the activity of this organ. If, on the contrary, we say that a *symptom is a sign of reaction to, or counter-attack against disease*, we shall administer, in small doses, drugs tending to increase the pain (as is done by the practitioners of homeopathy). But if a *symptom means for us a reaction to life*, we will at once ask ourselves why this stomach is re-acting with such abnormal vigor to stimuli which seem to be normal. Our attention will then be directed to any circumstances tending to exaggerate the force of stimuli, that is, tending to put the individual in a false position toward his environment.

All sorts of possibilities will at once present themselves—possibilities of which, acting on either of the other two ideas—we should have remained unaware.

They will group themselves naturally under 4 headings:

(1) Circumstances, other than bodily, which may render the normal calls or stimuli of life more difficult to meet.

(2) Changes in the sense organs which may have the effect of exaggerating the nor-



mal stimuli of life (as a megaphone exaggerates sound or a raw wound exaggerates touch).

(3) Alterations in the irritability of the nervous system (the brain, spinal cord and nerves) which may have the effect of amplifying the stimuli passing along this system.

(4) Changes in the actual organs, because of which they will be unable to respond normally to normal stimuli.

Possibilities 2 and 3 assume a magnification by the body of the calls of life; possibility 1 assumes an addition of some kind to the calls of life, rendering these calls more emphatic; possibility 4 assumes that the calls of life reach the organs unchanged and in normal fashion. Reaction to these calls is abnormal only because the organ itself is incapable of sustaining it.

Faith-healing is healing by the removal of circumstances, other than bodily, which render the normal calls or stimuli of life more difficult to meet. It often succeeds in those cases in which the inimical circumstances are mental or spiritual, and in such cases really does abolish physical ailments, i. e., symptoms which have arisen as a consequence, and which are an expression of inability on the patient's part to meet the demands of life. It fails when the inimical extra-corporeal circumstances are physical, e. g., climatic, or when actual bodily changes are exaggerating or distorting the stimuli of life to which the patient is compelled to make response.

Faith, *esprit de corps*, confidence in a doctor, and so on, all act by *removing anxiety*, though this end is achieved by each in its own way. A sense of safety (belief in God, in the regiment, in the man) is engendered, which effectively counters either an imaginary or a real fear, and so the burden of necessary response to life is lightened. Every activity becomes easier. Thus, a regiment will endure physical stresses above the powers of many of its individual members when acting alone. Such influences as music and art have a similar effect, and are rightly described as possessing the power to "charm away" depression and gloom, and so to release energies for useful work.

The medicine of the future will not, I think, remain blind to these vast stores of help which lie ready to hand. Once upon a time, the priest was the doctor; tomorrow the doctor may well have become the priest, in a new sense of the word. At least, he will see to it that his patient is free from gloom and anxiety, and possesses all the confidence and support which the world can afford him.

The curious failure of many doctors to un-

derstand the successes achieved by "quacks" and by less scrupulous members of their own profession, is due, I think, to their failure to realize that mental states can act with all the force of violent physical stimuli, such as blows or shocks. In their detestation of ignorance, dishonesty or mere acquisitiveness, these good people rule out the conception of man as a reacting organism, and busy themselves exclusively with disease. They speak to patients in terms of disease, not in terms of life, and the patients, often enough, are filled with a nameless dread which exaggerates all their existing symptoms and not infrequently adds fresh symptoms to them.

The brief survey of the origins of symptoms makes it clear that they are expressions of *inadequate reaction to life*, and that each of them may depend for its inception on one of a large number of factors, or even on several factors in combination. It emphasizes the vast importance for the physician of a general outlook, as opposed to a narrow specialism. Specialists are of course, necessary; but their work is, properly, to amplify in given directions the observations of the physician, and not to attempt to take control of operations on their own behalf. The days when the treatment of disease can safely be entrusted exclusively to bacteriologists, radiologists, psychologists, pharmacologists, or even to surgeons, is rapidly passing away.

Thus, I venture to foresee a great reaction in favor of the doctor, in the older sense of that much abused term. And I venture to foresee an evolution in the personality of the doctor himself. The physician of the future will not, as is now usually assumed, be a "scientist" of the orthodox type, a man with the technic of laboratories at his finger ends, and with the aim in his mind of elucidating the phenomena of life in terms of chemistry or physics. Rather, he will be a humanist, a man with the widest possible knowledge of human nature, and the deepest possible understanding of human motives. He will be a cultured man, ripe in intellectual attainment, but not lacking in emotional sympathy, a lover of the arts as well as a student of the sciences. This is, indeed, no more than a projection into the future of a gracious figure of the past—for the great physicians of other days were all, likewise, great citizens of humanity. Yet the projection is, I think, justified by reason of the very scepticism it is sure to arouse. I look forward to the time when the practice of medicine will include, within its scope, every influence of known potency over the human spirit, and when the practitioner, like Pygmalion, will look on his work and see, not disease and death, but the glowing lineaments of life."

## Special Article.

### SO-CALLED "WASSERMANN-FAST" SYPHILIS.

#### *Changes in the Blood Serum During Anti-Syphilitic Treatment.*

A. H. Coleman, M.D., A. J. Casselman, M.D.  
and R. S. Patterson, Ph.D.,

State Health Department, Trenton, N. J.

A "four-plus" Wassermann report is mistakenly accepted by many physicians as a measure of the actual strength of the reaction produced by the serum specimen submitted. That such an impression prevails is indicated by the fact that physicians have appeared to question the efficacy of antisyphilitic treatment when, in spite of repeated courses of the usual remedies, the Wassermann reaction of some of their patients continues to be reported as "four-plus". From the statements of these physicians, it appears that they anticipate a gradual reduction in the number of pluses in the Wassermann reports following administration of the routine antisyphilitic treatment.

The "four-plus" reaction is not a measure of the total strength of a serum reaction: usually it is merely an arbitrary sign for a reaction which, from long experience, is regarded by competent observers as definitely pathognomonic of syphilis, a reaction less marked in untreated cases being regarded as doubtful. A serum from a patient, which is reported as giving a "four-plus" reaction might be found by appropriate tests to give a reaction 16 times as strong as a typical "four-plus", but greater degrees of strength are not measured or reported as a routine by the Bureau of Bacteriology of the State Department of Health, or most laboratories, for the "four-plus" report is significant and serves all essential purposes.

It is possible to determine the exact amount of the substance in the serum which reacts to the Wassermann test, termed the syphilis "reagin", by means of a quantitative Wassermann reaction. But this procedure would materially increase the laboratory work out of all proportion to the benefit resulting from such a quantitative test. As the laboratories of the State Health Department are already taxed beyond existing facilities, which are limited by size of the available quarters in the State House, at Trenton, it has been found impractical to offer the quantitative Wassermann test to all physicians who might like to make use of it. But to illustrate the actual change in the strength of a serum reaction of patients under antisyphilitic treatment, it was decided to perform a quantitative Wassermann

reaction upon a few of the cases under such treatment at the New Jersey Reformatory for Women, at Clinton.

For the purpose of the quantitative test, the serum in each case was divided into 3 parts so that it could be tested, as follows: (a) undiluted, as used in the routine Wassermann reaction; (b) at a dilution of 1 part of serum in 3 parts of physiologic saline solution (hereafter designated at 1:4 dilution); and (c) at a dilution of 1:16\*. Each of these samples was tested with the 2 antigens used in the routine Wassermann reactions as conducted by the state laboratories—heart muscle extract antigen, and a similar antigen sensitized by the addition of cholesterol.\*\*

With this triple test, a positive reaction in the 1:4 dilution may be considered as having a strength of 4 times the routine "four-plus", and a positive reaction in a higher dilution would be read as 16 times "four-plus". In the histories which follow, the "plain-antigen" result precedes that with the cholesterolized or sensitized antigen: thus "2+, 4+" should be interpreted as "two-plus with the plain alcoholic extract of heart muscle and "four-plus" with the antigen sensitized by the addition of cholesterol.

The patients included in this series received 8 doses of sulpharsphenamin at weekly intervals in each course of treatment. A Wassermann reaction was taken at the beginning and at bi-weekly intervals throughout the course, and at the close of the series. Blood specimens were not collected during the succeeding course of treatment with mercury, which usually lasted for 16 weeks. This routine of treatment was adopted for the patients at the institution before the therapeutic use of bismuth was generally accepted. Leading syphilologists now recommend that bismuth replace at least half of the mercury formerly administered.

Three cases selected from the series of patients under observation are described in detail, for each is typical of a group of serum responses of patients under vigorous antisyphi-

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\*Varying the amounts of serum used is the obvious method of determining the amount of syphilis "reagin" in the blood, although advantages have been claimed for variations in some of the reagents. For instance, Browning and Mackenzie, *Diagnosis and Treatment of Syphilis*, 1911, Ed., Constable and Co., urged the use of varying amounts of complement; whereas Kolmer, *Studies in the Standardization of the Wassermann Reaction*, Am. J. Syph., 6:1, 1922, incorporating the best points of several methods in his modification, includes a quantitative feature obtained by varying the amounts of serum.

\*\*The technic of the routine Wassermann test is described in "The Clinical Use of the Wassermann Test", Public Health News, 9:1 (December, 1925.)



litic treatment. One group maintained a persistent positive reaction for long periods in spite of treatment; another group responded adequately to treatment; whereas the serum reactions of others follow an erratic course.

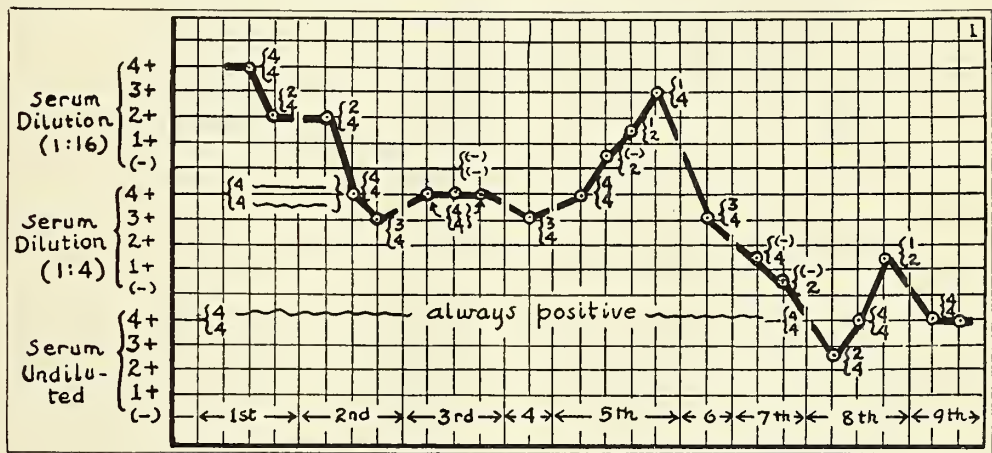
A SO-CALLED "WASSERMANN-FAST" CASE.

Case No. 1 illustrates the apparent hopelessness of the picture when only the routine Wassermann reaction is available as an aid to de-

termine the value of antisyphilitic treatment, for throughout 3 years of treatment the Wassermann report on this patient was invariably "four-plus". Such a case would be misnamed "Wassermann-fast" by many physicians; yet study of the actual serum response of the patient to her treatment (as set forth graphically in Chart I) shows a general improvement not revealed by the routine Wassermann.

Chart I. Indicating the Approximate Trend of the Serum Response to Prolonged Antisyphilitic Treatment.

(The curve in this and succeeding graphs is broken to indicate periods between courses of arsphenamin when no blood specimens were taken.)



The routine Wassermann reaction (undiluted serum) was repeatedly "four-plus" throughout 1923, 1924, and part of 1925. During the same period the serum diluted 1:4 was found to be almost invariably "four-plus". Only the higher dilution 1:16 showed the true effect of antisyphilitic treatment.

Case No. 1 (F. P.) is a woman, 30 years old, with latent syphilis of undetermined duration and without lesions or symptoms. A routine Wassermann (undiluted) was found to be 4+, 4+. Her treatment was begun in August, 1923, with weekly injections of mercury. During the first course of treatment with arsphenamin (old), the Wassermann reaction (both undiluted and dilution 1:4) remained 4+, 4+; but the reaction (dilution 1:16) dropped from 4+, 4+, to 2+, 4+. Instead of administering mercury after the first course, a second with arsphenamin was begun immediately and succeeded in reducing the Wassermann (dilution 1:4) to 3+, 4+, which returned to 4+, 4+ when monarson was substituted for arsphenamin in the third course of arsenicals.

Sulpharsphenamin was employed as the arsenical for the fourth course, at the close of which the Wassermann (dilution 1:4) returned to 3+, 4+. Monarson was again used in the fifth course of arsenical treatment and not only did the Wassermann (dilution 1:4)

return to 4+, 4+, but the higher dilution (1:16) showed increasing degrees of reaction. During the sixth arsenical course, in which sulpharsphenamin was used, the Wassermann (1:4) dilution returned to 3+, 4+, when the patient was paroled to continue treatment outside the institution. The use of monarson was discontinued, as it was not used routinely at the institution.

During her seventh course of treatment the patient was returned for violation of her parole and continued with sulpharsphenamin. At the close, her Wassermann (dilution 1:4) was reduced to (—), 2+. The eighth course resulted in reducing the Wassermann (undiluted) to 2+, 4+, but at the close it rose again to 1+, 2+ with the serum (dilution 1:4). During the ninth course, in which the Wassermann (undiluted) remained at 4+, 4+, the patient was released from the institution to continue treatment outside.

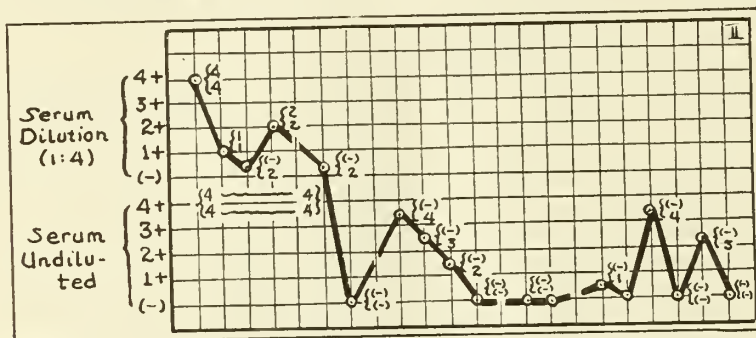
During the 3 years, 40 "four-plus" Wasser-

mann reports were returned after examination of the undiluted serum. Such a series would have proved most discouraging had not the returns from the higher dilutions indicated some response to antisyphilitic treatment, or had not the true meaning of the "four-plus" report been understood.

#### ADEQUATE RESPONSE TO TREATMENT.

In marked contrast to the first patient, Case No. 2 typifies the group of patients in which the desired decrease in the strength of the Wassermann reaction occurs in such a way that it can be measured by the routine Wassermann test (with undiluted serum).

Chart II. Typical of Cases Showing Prompt Serum Response to Antisyphilitic Treatment.



Throughout the first year's treatment, the serum Wassermann reaction was greater than "four-plus". The downward curve following the earlier treatments is continued and indicated by the results of the ordinary Wassermann during the second year.

Case No. 2 (N. K.) differed in no essential way from Case No. 1. The routine Wassermann taken upon admission to the institution gave a 4+, 4+ reaction. When this was repeated at the beginning of the first course of arsphenamin, the Wassermann (dilution 1:4) was also returned to 4+, 4+. At the close of the first course the Wassermann (dilution 1:4) was reported 2+, 2+.

At the beginning of the second course of sulpharsphenamin, the Wassermann (undiluted) was 4+, 4+, the dilution (1:4) being (—), 2+, and at the close the reaction had become negative to the undiluted serum. The serum, again slightly positive, (—), 4+, at the beginning of the third course of sulpharsphenamin, became negative to the ordinary test at the close. During the fourth course, the serum was reported repeatedly as negative, but during the fifth, 2 weekly positive reactions, (—), 4+, and (—), 3+, as well as double negatives were reported by the laboratory. This "jumpy" condition is typical of many of the histories in the institution, and is considered as an indication that the disease is approaching termination. Such reports are an indication not to give up treatment, but to press it vigorously in order to complete the cure.

Although the usual Wassermann reaction (undiluted serum) remained "four-plus" throughout the first year of treatment, this condition is anticipated in most cases of so-

called latent syphilis or of old untreated syphilis. During the second year the fall in the strength of the reaction was steady and measurable by the ordinary Wassermann.

#### SERUM REACTIONS SHOWING ERRATIC COURSES.

Not all syphilitic patients make adequate response to treatment, but not all the remainder may be included in the misnamed "Wassermann-fast" group. There are other syphilitic patients whose serum shows marked variations, which are particularly trying to the physician who attempts to guide his treatment by means of frequent Wassermann tests. The chart of Case No. 3 is typical of this kind of case.

Case No. 3 (L. W.) differed from the first cases only in that the Wassermann reaction was lower than the others. Beginning with a Wassermann (undiluted, of 2+, 4+, the serum reaction increased to a double "four-plus" during the first course of treatment. During the second course of the arsphenamin, the Wassermann (undiluted) returned to 2+, 4+, and remained, with variation, at about that level until the end. Throughout the third course the Wassermann (dilution 1:4) gave varying and weak reactions, and during the fourth course the undiluted serum reaction was reported as low as 2+, 3+. However, during the fifth course of arsphenamin, the serum reaction increased in strength from negative to 2+, 3+ with the Wassermann (dilution 1:4), and dur-



ing the sixth, twice gave a double "four-plus" with the undiluted serum. From this point the fall in the strength of the reaction was marked, and during the succeeding years has been reported as negative at almost every test.

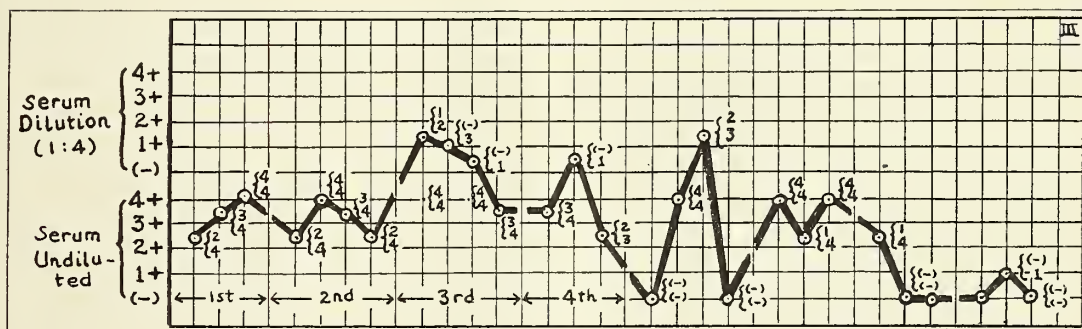
#### A SUGGESTED ROUTINE OF TREATMENT.

As noted above, the syphilitic patients under discussion were treated with an arsphenamin and mercury. The present procedure is to administer sulpharsphenamin in concentrated solution into the muscles of the back below the scapula, and insoluble mercury (salicylate) into the gluteal muscle. In accordance with recent suggestions of syphilologists, bismuth is substituted for half the mercury formerly administered.

Antisyphilitic treatment involves the use of

3 drugs, all of which may produce toxic conditions if administered in excess, and in the case of mercury and bismuth there is an additional danger of accumulation and subsequent uncontrollable intoxication. Therefore, it is recommended that the drugs be administered in short series, giving first 4 weekly doses of arsphenamin, then the same number of treatments with bismuth, followed by a similar course of mercury. This routine avoids the dangers of accumulation and consequent metal poisoning, and at the same time diversifies the attack upon the spirochete of syphilis. It is the opinion of many observers that long continued treatment with any one drug renders the organisms which survive the treatment relatively immune to further dosage with the same drug. The so-called "arsenic-fast" condition is reported frequently by syphilologists.

Chart III. Showing Marked Fluctuations in the Wassermann Reaction During Antisyphilitic Treatment.



It is our opinion that many of the minor variations and occasionally some of the peculiar, marked differences in strength of the Wassermann reactions are due to fluctuations in technic instead of to the marked daily variations in the syphilis "reagin" in the blood, which some investigators have claimed do occur. Therefore, we believe that, if it were practical to do more exact work, this curve would have been smoother and without some of the apparently sudden hollows and peaks.

The purpose of this rapid change of drugs in the routine treatment is to avoid such a condition.

Whether or not the superiority of the suggested routine of treatment over the one followed in this series can be measured by the effect upon the quantitative Wassermann reaction of patients remains for further study. The object in presenting this series of cases is to impress upon physicians the fact that, although throughout a long course of treatment the Wassermann reaction of the patient may be reported repeatedly as "four-plus", these findings do not indicate a stationary condition in

the patient's serum response or that antisyphilitic remedies are without effect. It should be considered instead as an indication that the serum of the patient in question is so high in syphilis "reagin" that repeated treatments have not as yet reduced the reaction of the serum to the point where it falls below the typical "four-plus" reading.

As indicated by this study, the term "Wassermann-fast" is a misnomer; such cases might better be called "syphilis-fast", and regarded as in need of continued medication regardless of the duration of the treatment already administered.

## Communications.

### A VISIT TO THE CLINIC OF DR. FRED H. ALBEE.

Postgraduate Hospital, New York City.

(A letter from John Hammond Bradshaw, M.D.  
F.A.C.S., Orange, New Jersey.)

Bone surgery has always had a string tied to it—one end to the surgeon, the other end to the patient. It is hard to bury orthopedic mistakes. They seldom die. The bone surgeon must work "on his toes". By necessity, a good orthopedist is a master mechanic, a skilled diagnostician and an honest doctor rolled into one. To him the x-ray has been the greatest boon but it is the one thing he can not escape. It remains for all time a permanent record of his error or his skill.

It is always a privilege to see a master work his hands. Hands are such wonderful tools! But just as in the game of golf the elect are few, so it is in surgery. Many are called but few are chosen.

Dr. Albee holds his surgical clinic at the Postgraduate Medical School twice a week and the quiet celerity of his movements show the high activity of those cells which we believe are chiefly located in the perineural spaces of the cortical brain.

The first case was complex. It was that of a poor girl, 11 years a paralytic from acute poliomyelitis. She was unable to walk, even unable to stand—we all know them—with knock knees and flail joints. About an even half dozen operations had been planned out to help her; and each one, Dr. Albee felt sure, would not only be absolutely necessary but would afford relief for this distressing condition. The knock knees were corrected by breaking her legs above the knees. The flail ankles, on which she could no more stand than on a whisp of her own hair, were consolidated by arthrokleisis. The joints were opened, the ankle bones taken out, and the cartilage that lined the joints and covered the bones was carefully excised. The bones were then replaced, the position corrected and a plaster cast held it all in perfect position until nature and time (both of which are good to the surgeon) should have done their part of the operation. The tendo Achilles was divided to enable the patient to bring down the heel that had been, as is usual in these cases, drawn up so that, when she walked, the whole sole of the foot would be normal. It is tiresome and ugly to walk on one's toes.

The next step in this case was interesting. The rectus femoris muscle (an extensor) was taken out and transplanted into the patella; thus making it change the function that the Creator of the Universe had intended for it, and to become a flexor muscle. This step was absolutely necessary for the patient, replacing the function of paralyzed muscles and thus enabling the girl to lift her foot from the floor; an act that she had been for 11 long years unable to accomplish. This all seems easy to write about, and even to the gallery of many doctors that watched the operation it went on so smoothly and quickly that it looked easy. Try it!

The next case was that of a fracture of the radius. This most important arm bone was fractured 2 in. above the wrist. Because of the well-known muscular and tendon attachment and relations at this site, it is most difficult to keep the ends of the fragments of this fracture in

such alignment that a good result will follow. That old miserable x-ray evidence is always showing one end overriding, seldom in approximation, even after many exasperating attempts at setting under an anesthetic. In these fractures Dr. Albee prefers to do an early open operation. After making a free 3 in. incision on the lateral radial aspect of the forearm the displaced broken bone popped out into sight. It looked as easy as shelling a pea out of a pod. A skillful, but gentle, (mark the word) use of leverage slipped the broken ends together and there they remained even under arm movements. No bone suture, splint or plate was required. This is important: "If the operation is done within a week from the accident the serrated ends of the bone will, when put in true apposition, hold the fragments in firm alignment". This, moreover, without fear of displacement; provided a carefully moulded plaster bandage is applied. During this little operation Dr. Albee took occasion to mention Lane plates which he consigns to the limbo of outer darkness. He grew eloquent when he portrayed the dangers and evils of traction tongs used so often on the condyles of the knee to make extension in cases of fracture of the femur. Fixation nails in the vicinity of a joint are most dangerous. "When you have a remote injury from a joint why make an added traumatism near that joint?" The danger of setting up a myelitis near such an important structure is no figment of the imagination! The office of these traction devices can be better filled by moleskin plaster that gives you no extra wounds. This plaster you can depend upon as you can not depend upon the other varieties.

The last case I witnessed at this, my only too short visit, was that of a man with Pott's disease of the spine. A psoas abscess, with sinus still draining, made an unpleasant complication. The spines of the affected vertebra were split and a 5 in. bone splint, which Dr. Albee cut with great care and celerity, with his celebrated bone saw, from the crest of the tibia of the right leg he fixed in situ with heavy kangaroo tendon in the sulcus thus made. This completed an operation, sometimes quite lengthy, in about 20 minutes. It stiffened a spine that showed marked signs of kyphosis. Dr. Albee then gave "a sermon" on psoas abscess and the evils of opening and drains (as had been done in this case) with the result of an illness protracted into years and all the dangers of exhaustion and ameloid degeneration of internal viscera.

### LETTER FROM BOARD OF MEDICAL EXAMINERS ANNOUNCING RECENT PROSECUTIONS.

The following is a report of the cases prosecuted since our last letter to you of April 25, 1926.

April 27, John H. Conover, unlicensed chiropractor of Union Hill, was tried on the fourth charge of practicing medicine without a license, found guilty and on refusal to pay the penalty was committed to jail. He later furnished bond and filed a second application to be discharged under the insolvent debtor's act. The application filed in the third action against him has not yet been decided by the Judge of Common Pleas Court.

Peter Lewkut, of Trenton, N. J., was found guilty of practicing medicine without a license on May 27. He refused to pay the penalty and was committed to jail for one day.

On May 27, William H. Kurtz, proprietor of an herb store, was tried on a charge of practicing



ing medicine without a license, found guilty and paid the penalty and costs.

Jacob N. Green, of Newark, N. J., a naturopath, was tried in the First District Court of Newark, on a charge of practicing medicine without a license, found guilty and paid the penalty and costs.

June 8, Benjamin Dashiell, an unlicensed chiropractor of Clayton, N. J., pleaded guilty to a charge of practicing medicine without a license, in the Gloucester Court of Common Pleas, and paid the penalty and costs.

Rudolph E. Brandman, a licensed osteopath of Hoboken, N. J., was arrested on June 8, on a charge of practicing medicine without a license, pleaded guilty and paid the penalty and costs.

June 8, Edward H. Ryan, an unlicensed chiropractor of Perth Amboy, N. J., pleaded guilty to a charge of practicing medicine without a license, in the New Brunswick District Court, and paid the penalty and costs.

June 18, Max Stecher, a druggist of Paterson; Wilfred E. Shuitt, a druggist of Passaic; Thomas Bruce, an unlicensed chiropractor of Paterson, and Antoni Janiga, proprietor of an herb store, in Passaic, pleaded guilty to charges of practicing medicine without license and paid the penalty and costs.

June 23, Sophie Reale, a licensed midwife of Long Branch, pleaded guilty to a charge of practicing medicine without a license and paid the penalty and costs.

Evan Parry, druggist of Atlantic City, was found guilty of practicing medicine without a license and paid the penalty and costs.

June 30, Samuel Barsky, a druggist of Atlantic City, pleaded guilty to a charge of practicing medicine without a license and paid the penalty and costs.

July 8, William MacDowell, of Woodstown, N. J., pleaded guilty to a charge of practicing medicine without a license and paid the penalty and costs.

In September, George C. Flamand, an unlicensed chiropractor, of Flemington, paid the penalty for practicing medicine without a license.

August 19, Arthur de Collard, who practiced poropathy, massage and manipulations in Newark, was arrested on a charge of practicing medicine without a license, pleaded guilty and paid the penalty and costs.

September 7, the case against the Mecca College of Chiropractic of Newark, N. J., for conducting a school without a license, was tried and was continued to give the Attorney General and the attorney for the defendant opportunity to file memorandums.

September 8, Leslie Paxon, proprietor of a drug store in Beach Haven, was arrested on a charge of practicing medicine without a license, pleaded guilty and paid the penalty and costs.

September 15, Louis H. Myers, a druggist of Atlantic City, paid the penalty for practicing medicine without a license.

September 15, George C. Lezenby, Jr., of Atlantic City, a naturopath, paid the penalty for practicing medicine without a license. This was the third offense.

September 17, Arthur Boerner, an "Herbalist" of Paterson, pleaded guilty to a charge of practicing medicine without a license and paid the penalty and costs.

April 30, the Board revoked the license to practice chiropractic, and the license to practice chiropody, of Paul N. Osder, of Philadelphia, Pa.

April 30, the Board revoked the license to

practice midwifery, of Bertha Bolte, of Jersey City.

April 30, the Board revoked the license to practice medicine and surgery of Herbert E. Emerson, of Paterson.

CHARLES B. KELLEY,  
Secretary.

### FINAL OPPORTUNITY FOR APPLICANTS FOR GROUP LIFE, HEALTH AND ACCIDENT INSURANCE.

To Members of the State Society who have not yet applied for this Insurance:

You still have a final chance to accept the extraordinary opportunity offered members of the State Society to secure this insurance. But the last day is at hand. The Prudential Insurance Company stopped writing all Association Group Life Insurance on August first and ours is only possible because of our prior negotiation for it. The time limit allowed was reached, but has been extended, through our importunity, to November 30 only.

The objects achieved are greatest protection at least cost. The value of the 2 policies—Life Insurance \$5000. for \$102., and Health and Accident Insurance \$5000. for \$70.—is plain on examining the provisions covered and the low premiums. But the advantages are wholly dependent on 75% of our members applying. Don't let the opportunity slip!

This final statement is now made to arouse action in those who have not applied. Every member has been personally addressed every month since the State Convention June 18, and the County Societies have further approved. Nothing remains but decision by the individual members. The rare advantages offered are universally admitted. The members who have applied are impatiently waiting for their policies. The time is very short. The opportunity cannot again be offered by any insurance company. Will you come in?

Sign and return the application blanks sent you, enclosing check for \$20., and avoid vain regrets later that you missed a good thing or prevented other members of the Society getting it.

Remember the emphatic limit of time—NOVEMBER 30—when the chance will be beyond recall.

Yours fraternally,

FRANK W. PINNEO,

Chairman for the Committee.

## National Medical News.

### A SURVEY OF STATE HOSPITAL FACILITIES.

The Journal of the American Medical Association for April 3, 1926, was devoted in large measure to a consideration of the nation's hospital facilities, and the conditions in each state were shown graphically by a map and accompanying list of hospital locations. We can not reproduce the entire report (those interested in any special feature of hospital problems will probably find reference to it in J. A. M. A., Vol. 863, pages 1009 to 1074) but are permitted to present the map indicating hospital distribution in our own state, and will direct special attention to some of the comparative data showing New Jersey's relative standing.

"The list following names the hospitals available for active medical and surgical service in

their respective localities, including general medical and surgical hospitals, also tuberculosis, nervous and mental, maternity, orthopedic, pediatric; but does not include state institutions that are devoted largely to the custodial care of incurable and nervous or insane patients; nor institutions for deaf, blind, crippled and aged persons; nor prison hospitals; nor hospitals limited to government beneficiaries, such as those of the U. S. Army, Navy, Public Health or Veteran's Bureau."

Hospitals marked with a star (\*) are approved by the Council on Medical Education and Hospitals for internship or the fifth year in medicine. Those marked with a dagger (†) are approved for residences by those who have already had a general internship.

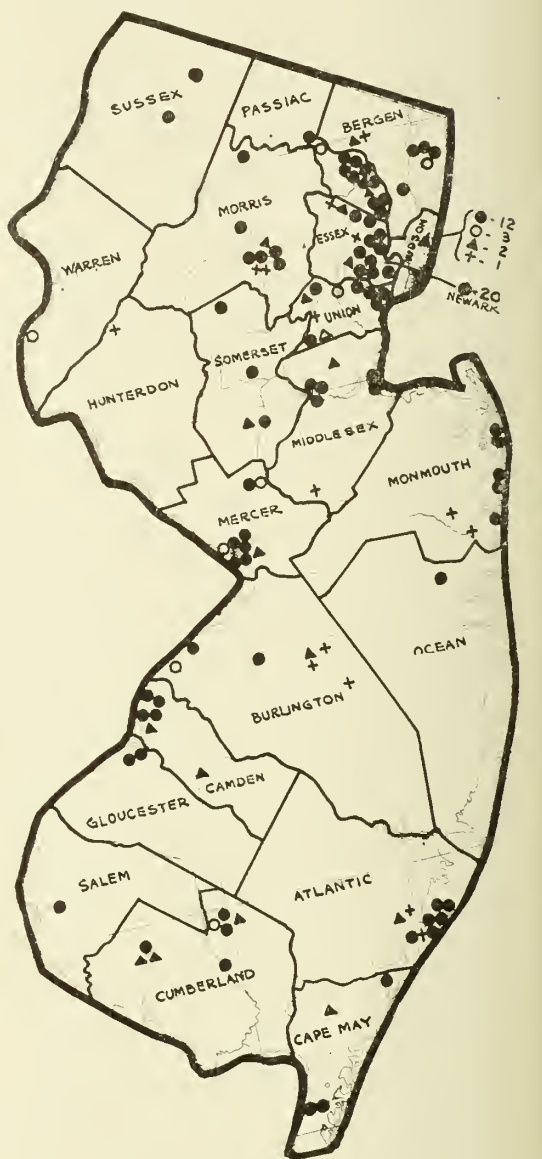
The hospital census figures of 1925 show for New Jersey: Population, 3,506,428. General hospitals, 84; number of beds, 8960; average number in use, 5921. Nervous and mental disease hospitals, 24; beds, 10,870; average in use, 9819. Tuberculosis hospitals, 15; beds, 1975; average in use, 1615. Other class of hospitals, 57; beds, 3142; in use, 1837. Total hospitals, 180; beds 24,947; average in use, 19,192. To this should be added 1176 bassinets, or baby cribs. Since the above figures were published several new hospitals have been projected and a number of the existing institutions have been conducting campaigns to raise funds for increasing their facilities.

In a table showing the ratio of beds to population, (hospitals for community use) New Jersey stands next to the leader in the North Atlantic group of states: New York having 1 bed for each 200; New Jersey 1 for each 207; and the percentage of beds occupied 74 for New York, 72 for New Jersey, and 70 as the average for all.

Of the 180 hospitals in the state, 57 employ physicians as Superintendents; 47 have such positions filled by registered nurses; while 75 are supervised by nonprofessionals. The number of hospitals having resident physicians is 67, and the total number of residents, 132. The number of hospitals having medical staffs is 138, and the number of physicians listed as staff members reaches 3121.

NEW JERSEY		Total Beds	Av. Beds in Use
<b>Allenwood, ———— Monmouth</b>			
Allenwood Sanitarium & Monmouth County Hospital (T.B.) .....	55	55	
<b>Arlington, ———— Hudson</b>			
West Hudson Hospital .....	32	21	
<b>Atlantic City 53,287—Atlantic</b>			
Atlantic City Hospital* .....	195	140	
Children's Seashore House for Invalid Children .....	390	380	
Dr. Leonard Private Sanitarium Seaside House for Invalid Women .....	132	87	
<b>Bayonne, 88,767—Hudson</b>			
Bayonne Hospital and Dispensary* .....	100	80	
Swiney Sanitarium .....	28	15	
<b>Bellemead, 50—Somerset</b>			
Bellemead Farm Colony & Sanitarium (N.&M.) .....	100	60	
<b>Belleville, 18,927—Essex</b>			
Essex Co. Hospital for Contagious Diseases....	350	85	
<b>Bridgeton, 14,387—Cumberland</b>			
Bridgeton Hospital .....	82	35	
Cumberland Co. Hospital for Insane .....	175	175	
Ivy Hall Sanitarium (N.&M.) .....	25	23	
<b>Brown's Mill, ———— Burlington</b>			
Deborah Tuberculosis Sanat. ....	40	40	
<b>Camden, 128,642—Camden</b>			
Bellevue Private Hospital .....	25	18	
Cooper Hospital* .....	201	154	
West Jersey Homeopathic Hospital* .....	140	90	
<b>Cedar Grove, 569—Essex</b>			
Essex County Hospital (N.&M.) .....	2000	1936	
<b>Chatsworth, 100—Burlington</b>			
The Pines Sanatorium (T.B.) .....	30	10	
<b>Dover, 9,817—Morris</b>			
Dover General Hospital .....	24	17	

<b>Elizabeth, 95,783—Union</b>	Total Beds	Av. Beds in Use
Alexian Brothers' Hospital* .....	110	90
Elizabeth General Hospital* .....	170	90
St. Elizabeth's Hospital .....	160	125
<b>Englewood, 12,590—Bergen</b>		
Daisy Fields Hospital for Crippled Children...	18	18
Englewood Hospital Association* .....	115	81
<b>Farmingdale, 416—Monmouth</b>		
Tuberculosis Preventorium for Children .....	180	150
<b>Franklin, 4,075—Sussex</b>		
Franklin Hospital .....	25	15



Total hospitals in New Jersey, 180; for community use, 103; population per hospital bed, 207; percentage of beds occupied, 72; percentage of counties without hospitals, 4.8.

<b>Grenloch, ———— Camden</b>		
Camden Co. Hospital for the Insane .....	350	241
Sunny Rest Sanatorium (T.B.) .....	228	210
<b>Hackensack, 19,715—Bergen</b>		
Hackensack Hospital* .....	225	135
<b>Hoboken, 68,166—Hudson</b>		
Farr Sanatorium .....	20	10
St. Mary's Hospital* .....	450	109



	Total Beds	Av. Beds in Use		Total Beds	Av. Beds in Use
<b>Irrington, 33,186—Essex</b>			<b>Somerville, 6,718—Somerset</b>		
Irrington General Hospital .....	75	60	Somerset Hospital .....	74	35
<b>Jersey City, 315,280—Hudson</b>			<b>South Amboy, 7,897—Middlesex</b>		
Bergen Private Sanitarium .....	30	20	South Amboy Memorial Hospital .....	35	15
Christ Hospital* .....	110	75	<b>South Orange, 7,274—Essex</b>		
Fairmount Private Hospital .....	48	40	Dr. Runyon's Hospital .....	15	5
Greenville Hospital .....	60	28	<b>Spring Lake Beach, 853—Monmouth</b>		
Jersey City Hospital* .....	570	447	Ann May Memorial Homeopathic Hospital....	69	55
St. Francis' Hospital* .....	220	150	<b>Summit, 11,687—Union</b>		
<b>Lakewood, 3,000—Ocean</b>			Fair Oaks Sanatorium (N.&M.).....	41	38
Paul Kimball Hospital, Inc. ....	50	30	Overlook Hospital .....	80	50
<b>Long Branch, 13,646—Monmouth</b>			<b>Sussex, 1,318—Sussex</b>		
Dr. E. C. Hazard Hospital .....	57	26	Alexander Linn Hospital .....	20	10
Monmouth Memorial Hospital* .....	176	110	<b>Teaneck, ————Bergen</b>		
<b>Midland Park, 2,243—Bergen</b>			"Bright Side" Sanitarium .....	25	22
Christian Sanatorium (N.&M.) .....	50	46	Holy Name Hospital .....	155	New
<b>Millville, 15,960—Cumberland</b>			<b>Trenton, 132,020—Mercer</b>		
Millville Hospital .....	30	18	Mercer Hospital* .....	155	92
<b>Montclair, 32,922—Essex</b>			Orthopedic Hospital and Dispensary .....	21	20
Mountainside Hospital* .....	216	108	St. Francis' Hospital* .....	211	205
<b>Morristown, 12,570—Morris</b>			Wm. McKinley Memorial Hospital* .....	136	80
All Souls Hospital .....	90	58	<b>Union, 63,117—Union</b>		
Aurora Health Farm .....	20	12	Hamilton Sanitarium .....	30	15
Morristown Memorial Hospital* .....	150	79	<b>Ventnor, 491—Atlantic</b>		
Physiatric Institute .....	100	60	North American Sanitarium for Surg. Tuberc. ....	40	37
Shonghum Sanatorium (T.B.) .....	44	32	<b>Verona, 3,039—Essex</b>		
<b>Mt. Holly, 5,750—Burlington</b>			Essex Mountain Sanat. (T.B.) .....	250	215
Burlington County Hospital .....	35	25	Montclair Fresh Air and Convalescent Home..	40	36
<b>Newark, 452,513—Essex</b>			<b>Vineland, 6,799—Cumberland</b>		
The Babies Hospital .....	40	26	Newcomb Hospital .....	65	40
Homeopathic Hospital of Essex County .....	50	36	<b>Weehawken, 11,228—Hudson</b>		
Hospital and Home for Crippled Children .....	64	58	North Hudson Hospital* .....	92(a)	68
Hospital for Women and Children .....	60	30	<b>Wildwood, 2,790—Cape May</b>		
Hospital of St. Barnabas* .....	119	82	Margaret Mace's Hospital .....	10	6
Lincoln Private Hospital .....	30	15	<b>Woodbury, 5,801—Gloucester</b>		
Newark Beth Israel Hospital* .....	102	95	Brewer Hospital .....	18	12
Newark City Hospital* .....	650	560	Underwood Hospital .....	24	16
Newark Eye and Ear Infirmary .....	56	10	One General Hospital of less than 10 beds.....	6	1
Newark Maternity Hospital .....	30	22			
Newark Memorial Hospital* .....	150	110			
Newark Private Hospital .....	50	40			
Presbyterian Hospital .....	80	61			
St. Gerard's Newark Italian Hospital .....	100	30			
St. James Hospital* .....	115	75			
St. Michael's Hospital* .....	300	250			
Dr. Waite's Surgical Sanatorium .....	15	6			
Dr. Wright's Sanitarium .....	20	10			
<b>New Brunswick, 37,984—Middlesex</b>					
Francis E. Parker Home .....	28	20			
Middlesex General Hospital .....	60	46			
St. Peter's General Hospital .....	91	80			
<b>Newfoundland, 564—Morris</b>					
Newfoundland Health Association .....	30	20			
<b>New Lisbon, 50—Burlington</b>					
Burlington County Hospital for the Insane....	200	193			
Fairview Sanatorium (T.B.) .....	55	45			
<b>Northfield, 1,127—Atlantic</b>					
Atlantic Co. Hospital for Tuberculous Diseases .....	50	28			
Atlantic Co. Hospital for Mental Diseases....	300	250			
<b>Orange, 35,379—Essex</b>					
New Jersey Orthopedic Hosp. and Dispensary .....	35	33			
Orange Memorial Hospital* .....	180	163			
St. Mary's Hospital* .....	130	80			
<b>Passaic, 68,979—Passaic</b>					
Passaic General Hospital* .....	112	80			
St. Mary's Hospital* .....	115	76			
<b>Paterson, 141,695—Passaic</b>					
Barnert Memorial Hospital* .....	100	75			
Paterson City Hospital .....	110	58			
Paterson General Hospital* .....	167	110			
Riverlawn Sanatorium (N.&M.).....	50	25			
St. Joseph's Hospital* .....	290	150			
<b>Perth Amboy, 47,136—Middlesex</b>					
Perth Amboy City Hospital .....	100	41			
<b>Phillipsburg, 18,633—Warren</b>					
Warren Hospital .....	60	12			
<b>Plainfield, 31,748—Union</b>					
Muhlenberg Hospital* .....	125	105			
Plainfield Sanitarium .....	55	15			
<b>Pompton Lakes, 2,008—Passaic</b>					
St. Paul's Deaconess Home and Hospital.....	40	5			
<b>Princeton, 5,917—Mercer</b>					
Princeton Hospital .....	35	18			
<b>Ridgewood, 7,580—Bergen</b>					
Bergen Pines Bergen County Hospital (T.B.)..	250	100			
<b>Riverside, 4,000—Burlington</b>					
Zurbrugg Memorial Hospital .....	12	6			
<b>Riverton, 2,341—Burlington</b>					
Cinnaminson Home .....	25	14			
<b>Salem, 7,435—Salem</b>					
Salem Co. Memorial Hospital .....	32	20			
<b>Scotch Plains, 1,000—Union</b>					
Bonnie Burn Sanatorium (T.B.).....	280	252			
<b>Secaucus, 5,423—Hudson</b>					
Hudson County Hospital .....	144	140			
Hudson County Hospital for Insane .....	1400	1000			
Hudson County Smallpox Hospital .....	50	34			
Hudson Co. Tuberculosis Hospital .....	189	173			
			Total for community use, 103.....16,874 12,189		
			In New Jersey the following county has no hospital for community use: Hunterdon.		

## Lay Mirror Reflections

### WOMEN'S STYLES HELP HEALTH.

According to the New York Sun (May 13, 1926) the modern tendency of women to wear fewer clothes has resulted in a marked improvement in their health, and one might well draw the inference from the following editorial that men would do well to imitate these new styles in dress rather than waste so much time in futile criticism:

Prophecies as to the disastrous consequences the clothing now popular among women would have on their health have been numerous during the last 5 years. Open neck waists in all kinds of weather, short skirts of little protection below the knees, sleeveless frocks, slippers or sandals, and the gradual disuse of undergarments, which had been for generations traditional were expected to weaken women's power of resistance until they would be peculiarly subject to pulmonary disorders. During this period the dress of man has varied little if at all from former styles.

But no disastrous results of their indifference to exposure seem to have been experienced by women. On the other hand, during the period from 1920 through 1925 tuberculosis—one of the diseases it was predicted exposure due to following the prevailing mode would increase—was fatal to 50% more men than women. An analysis of the figures showing age and sex was made by the New York Tuberculosis and Health Association, using the New York City Department of Health statistics, to determine where the ef-

fight for education against the disease should be concentrated.

The statistics show a striking decline in deaths from tuberculosis among women after the age of 30. Half of the men who die of the disease pass out between 35 and 50. These are the productive years of a man's life. Twice as many men as women die of this disease between 36 and 40, more than twice as many between 40 and 45, and three times as many between 45 and 60.

### TEACHING DEFECTIVE CHILDREN.

Pride in our state institutions and in the work emanating therefrom is a natural and laudable sensation; one that is, incidentally, wonderfully stimulated by a word of praise from an outsider. New Jersey is justifiably proud of her Training Schools for the mentally defective, and it is with pleasure that we note approval of the work being done in this field. The following editorial item appeared in the New York Times of October 8, 1926.

Typical of the desire for intimate understanding and close relationship between the various branches of education today is the Bulletin published monthly by the Training School at Vineland, N. J. Its purpose is to aid and encourage those whose minds have not developed normally. In its field, the publication brings together reports of work for defectives at this and other institutions, and provides a place for those who are interested to give their opinions, critical or laudatory.

The current number presents a variety of news and results indicative of the close coöperation between workers in this department of education. A study in the physiologic maturity of feeble-minded girls is made by a scientific researcher. Changes in disciplinary methods in institutions for defectives are reported by the head of one of them. Instead of punishments for bad behavior, rewards for good behavior are held out. A pat on the back, above the waist, gets better results than several pats below.

Diplomatic methods rather than force are also recommended in a contributed article by an attendance officer of a Detroit public school. In that city there is a system of child accounting which sees that each child is in the proper school every day. Though there are but 4 recognized reasons for absence, the "hookey cop" finds as many situations to deal with as there are absent children. Of course, many of the cases are of boys and girls who belong in ungraded classes, in special groups for subnormal pupils, or in institutions. Where poverty has led parents to keep the child out of school to work, education must go behind the child into the home. Some parents have no idea of what a normal child should be able to do. They have no standards of comparison. One slow child was excluded from a special class as nonteachable. He was to be put into an institution. But his mother had thought he was getting along so well. John was 10 years old, and "doing fine". He could almost write his name—all but the "J" and the "hn". For such children with such parents the truant officer is a blessing.

Even in comfortable or wealthy homes parents are sometimes ignorant or negligent. One father supplied his son with plenty of money and an automobile and departed with the mother for

Bermuda. He said he was surprised to learn that his son had not been in school every day during their absence. The old methods of former days are useless in all such cases. "Hookey cops" these days must be masters of tact. They must be imaginative as well as accurate, adaptable as well as stable. And like all those whose work brings them into contact with the mentally defective, they must have an inexhaustive supply of sympathy and a genuine desire to help.

### A GOVERNMENT HOSPITAL NEEDED.

Under the above title, the Atlantic City Press—July 8, 1926—calls attention to the neglect to provide satisfactory hospitalization for a very important group of our World War veterans. While the medical profession is probably in no way to blame for this, it is a matter in which we might well interest ourselves with a view to assisting in solution of the serious problem confronting both the state and the nation.

New Jersey has been extremely laggard in caring for the war veteran suffering from mental diseases. As a result there has been a steady increase in the number of afflicted, whose ailments are not of the shell-shock class, but on that twilight border where with proper treatment they stand a fair chance of being restored to normalcy.

No government hospital exists in this state to care for veterans. When an ex-soldier shows signs of being somewhat irrational, he is consigned to a hospital for the insane, with a result that a mild disorder is aggravated by the environment and sometimes acute maladies develop when they might have been avoided. The Red Cross resents this situation but has no means of remedying it.

This state at present has 466 World War veterans under supposed supervision, but 128 of them are roaming about, when they should be in a ward for observation. New Jersey does not stand alone in this lack of provision for the returned soldier of weak mentality. There are ten other states without a government hospital. To send our men to other states provided with such institutions is neither fair to our neighbors nor to ourselves. The patients of the more fortunate states are selected first from residents, thus creating a waiting list among outsiders.

The need is for a general government hospital in New Jersey under control of the Veterans' Bureau.

### COLDS ARE A CURSE.

In the column of Timely Topics, the New York Times recently carried the important announcement that financial support is to be provided for a scientific investigation into the etiology of the common "head cold". This is a consummation devoutly to be wished and physicians will be glad indeed if some practical results shall eventuate from this research.

The ambition to "make colds as rare as small-pox" is said to be the moving force behind the proposal of the Chemical Foundation to organize and support extensive and intensive scientific



research into the cause and prevention of common colds.

That this ailment yearly takes an enormous toll in discomfort and in loss of energy is well known. That it is one of the most difficult to guard against is also accepted. But many persons have long felt that medical and lay men alike have been too much inclined to regard colds as inevitable. The former have not devoted enough attention to prevention or cure and the latter have not realized the dangers and responsibilities of infection.

If, therefore, some organization of a scientific character can undertake an exhaustive study of colds in all their forms, and can find for them the preventives which, unless the lessons of checking much more dangerous diseases are to be ignored, must exist, it will be doing a great service to mankind. Even when colds are not followed by graver illness like influenza or pneumonia, they inevitably lower the individual's resistance to all types of sickness.

## In Lighter Vein

### A Clean Break.

"No, sir," said Mr. Benjamin Trebbit, "it's all wrong. What with the latest discoveries and the newest inventions, a man dies just through sheer carelessness. Not for me. I'm going to watch my step, and live forever."

He brushed his teeth twice daily—with the right kind of toothpaste.

He "got himself examined"—every three months.

He always went in when it rained.

He slept with the windows open.

He stuck to a diet—with plenty of fresh vegetables.

He relinquished his tonsils and traded in several worn-down glands.

He wore spectacles.

He played golf—but never more than eighteen holes at a time.

He took ocean trips—when the weather was settled.

He never smoked, drank or lost his temper.

He wore pediform shoes, and white socks.

He did his daily dozen daily.

He never worried.

The funeral of the late Benjamin Trebbit will be held next Thursday. He is survived by eighteen specialists, four health institutes, six gymnasiums and numerous manufacturers of antiseptic appliances and sanitary foods.

(He had forgotten about taxicabs.)

—(Henry William Hanemann, in *Life*.)

The main difference between a girl chewing her gum and a cow chewing her cud, is that the cow generally looks more intelligent.

The proofreader on a small Middle Western daily was a woman of great precision and extreme propriety. One day a reporter succeeded in getting into type an item about "Willie Brown, the boy who was burned in the West End by a live wire."

On the following day the reporter found on his desk a frigid note asking: "Which is the west end of a boy?"

It took only an instant to reply: "The end the son sets on, of course."

## Observations from the Lighthouse.

### CARDIOVASCULAR RENAL DISEASE.

At the recent Annual Meeting of our State Medical Society one entire session was devoted to consideration of cardiac affections, particularly to cardiovascular renal conditions, and we are publishing that symposium in this issue of the Journal. It happens that at the Dallas meeting of the A. M. A. there were no less than 3 section meetings conducting symposiums of a similar nature; the Section on Medicine dealing with acute and chronic cardiac disease and with cardiorenal hypertension; the Surgical Section treating of sympathectomy for relief of angina pectoris; and the Section of Pharmacology and Therapeutics considering the therapy of hypertensive cardiac disease. Since the first and third of these A. M. A. groups of papers bear upon and are related to the subjects discussed by our contributors this month, it seems an appropriate time to present abstracts of their subject matter.

### The Visceral Manifestations of Cardiovascular Hypertensive Disease.

Joseph L. Miller (J. A. M. A., 87:383, Aug. 7, 1926) says: "The visceral manifestations of hypertension arise, in a large measure, from the arterial changes that accompany this condition. These changes are secondary to, and apparently the result of, the hypertension, or are perhaps excited by the same agency responsible for the vascular spasm. The renal changes usually observed in advanced hypertension are thought to be secondary to changes in the arterioles of the kidney. Neuroretinitis is not observed in arteriosclerosis without hypertension, nor is it dependent on impaired kidney function alone. It is in some manner associated with hypertension and the accompanying renal changes.

"Next to the kidney, the heart suffers as a result of increased work, actual changes in the heart muscle playing a very unimportant rôle. Fishberg has recently studied in a comprehensive manner the character and distribution of the arterial changes in 72 cases of essential hypertension. Histologically, these changes were similar to those found physiologically in the aged; a thickening of the intima with progressive atrophy of the media. The arterioles of the kidney were involved in 65% of his 72 cases; the pancreas, in 50%; the liver, in 30%, and the brain in 20%. The myocardium was very infrequently involved. This supports the view that cardiac decompensation in hypertension is largely the result of increased load.

"The relation of the kidney to hypertension is still a debated question. Nephritis is the one established etiologic factor. It is only necessary to recall the progressive rise in pressure in the acute glomerular nephritis following scarlatina. What actually occurs is still a mystery. Its rather rapid development and frequently transitory character strongly suggest a functional disturbance. It was formerly thought that persistent high blood pressure was always secondary to renal changes. During the early years of hypertension, there is usually no clinical or laboratory evidence of nephritis. If such a patient is followed, very frequently albumin and casts will appear in the urine. Eventually the urinary findings may be characteristic of nephritis. With this there may be some impairment of kidney function, as shown by the phenolsulphonphthalein test or the blood chemical determinations.

This group, in which renal changes, if present, appear late in the disease, is now designated as essential hypertension, the appearance of kidney disturbance being considered secondary to the high blood pressure and arterial changes. The vast majority of hypertension patients fall in this group.

"The 2 most frequent causes of disability or death are cerebral hemorrhage and cardiac decompensation. Termination by uremia is relatively infrequent.

"It is impossible to make an accurate prognosis in the ordinary ambulatory hypertensive case. Patients with systolic pressure of 200 mm. or more live comfortably for many years. Others with a much lower pressure may acquire a hemiplegia or cardiac decompensation. A great deal depends on the patient's ability and willingness to follow the physician's advice. Obesity or hard manual labor predisposes to cardiac decompensation. The more marked the renal changes, the more grave the prognosis."

#### The Ultimate Results of Essential Hypertension.

Having carefully studied the blood pressure in fatal cases of cardiac disease, the complications arising in living patients during the period of observation, and the cases of death among these patients, James E. Paullin, (J. A. M. A., 87:925, Sept. 18, 1926) presents a detailed report of his series of 76 cases.

"Since the recognition and description of hyperpiesia, essential hypertension or vascular hypertonia by Sir Clifford Allbutt, the condition has slowly been recognized as a clinical entity. By the term essential hypertension, we understand a condition in which the patient has a persistent elevation of the systolic, and usually the diastolic, blood pressure for which there is no demonstrable cause. In the early stages all the patients are without evident cardiac hypertrophy and without demonstrable renal lesions, as evidenced by the fact that the kidneys are able to dilute and concentrate; albumin is rarely present in the urine, and only occasionally a few hyaline casts are found; there is a normal phenolsulphonephthalein excretion, and the chemical components of the blood are normal except for a slight rise in the uric acid content. Eventually, the continued high pressure leads to cardiac hypertrophy and varying degrees of arteriolar fibrosis or arteriosclerosis, with perhaps a tendency to affect certain organs more than others.

"With this conception of the disease, a review of 76 cases of essential hypertension occurring in private practice is presented.

In a review of 76 cases of essential hypertension observed from 5 to 17 years, the number of cases was about equally divided between the two sexes. The mortality for the group of men was 48%, and for the women, 9.2%. During the 5 to 7 year period of observation, the mortality was remarkably higher among the men. Myocardial failure occurred earlier than cerebral hemorrhage among the men. It occurred much earlier in men than in women. Death from cerebral hemorrhage in a majority of the cases was preceded by a previous apoplectic seizure. The greater number of deaths occur because of heart and blood-vessel weakness.

"The renal involvement in the late stages of this disease is usually very slight, only one death occurring in the series because of renal failure.

"Essential hypertension occurring in women about the time of the menopause is relatively benign and is associated with fewer accidents

and complications than for a similar group in men.

"No definite conclusions can be drawn as to the end-result in a given case from a study of the blood pressure alone.

"No definite prognosis can be given from a study of the blood pressure, the prognosis depending on the integrity of the heart and blood-vessels."

#### The Action of Hepatic Extract in Hypertension.

Turning now to the question of treatment, we find an interesting report of the later experiments conducted by Ralph H. Major (J. A. M. A., 87:311, July 31, 1926).

"In a systematic search for some product of metabolism having a pressor effect, we found that methylguanidin, a normal component of the urine, is capable of producing a marked and prolonged elevation of blood pressure in animals and in man. A further study of the urine in certain cases of arterial hypertension showed a diminished output of guanidin compounds when compared with normal controls, and in 2 patients suffering from a marked elevation of blood pressure we found a great increase in the excretion of guanidin coincident with a fall in blood pressure. A systematic study of the guanidin content of the blood in patients suffering from arterial hypertension would be of great interest, but at present we have unfortunately no simple or accurate clinical method of making such estimations.

"In a series of experiments carried out in the laboratory, we have studied the action of various salts and organ extracts which lower the elevation in blood pressure produced by guanidin compounds. Among the various substances examined, the effects of certain liver extracts were very marked in both reducing and preventing what we may term a guanidin hypertension. The liver extract with which we have worked is prepared by a process of alcoholic fractionation, the depressor substance being thrown down as a precipitate when an alcoholic content of approximately 90% is reached. This precipitate is dissolved in distilled water and is further purified by repeated adjustments of the reaction. The final purified precipitate is dissolved in saline solution, giving a clear, slightly brownish solution, which contains in the concentrations usually employed a nitrogen content of 0.001%.

"The behavior of the normal blood pressure to injections of liver extract is in marked contrast to that produced by histamin injections. A normal animal will withstand large doses of the liver extract without any fall in blood pressure, often from 15 to 20 times the dose necessary to lower to normal an elevation in blood pressure produced by guanidin. Histamin solution, on the other hand, of sufficient strength to lower the blood pressure produced by guanidin compounds will also depress the normal blood pressure of an animal. Very large doses of concentrated liver extract will lower the normal blood pressure, but their action on normal blood pressure is very feeble when compared with the powerful depressant action of histamin.

"Before employing our liver extract in the treatment of arterial hypertension, it is obviously necessary to work out a satisfactory method of standardization. A method has been worked out, in collaboration with Dr. G. H. A. Clowes and Mr. E. E. Swanson, which gives an adequate index of the activity of liver extract. This method consists essentially in introducing a dilute solution of methylguanidin sulphate through the



femoral vein of a cat or a dog until a definite rise in blood pressure to 20 mm. or more is produced, and then the liver extract is slowly introduced into the other femoral vein until the blood pressure is stabilized. The amount of guanidin solution injected is read off, together with the quantity of liver extract necessary to neutralize the guanidin. The temporary unit that we have employed is the amount of depressor substance necessary to neutralize 0.1 mg. of guanidin in an animal weighing 2.5 kilograms.

"We have treated up to the present time approximately 100 patients suffering from high blood pressure. This material represents ambulatory patients, patients under observation in hospital wards and those in private practice.

"The difficulties in drawing conclusions from this experience are very great. Patients under observation in the hospital, although they are not confined to bed, have a definite limitation of activity which may of itself induce a fall in blood pressure. Patients who are treated in the outpatient department do not give us the desired opportunity for repeated blood pressure estimations; they are difficult to control and many of them are irregular in their visits or cease their visits from time to time. The patients seen in private practice, in whom many of the most suggestive results have been obtained, have not, as a rule, been subjected to such repeated blood pressure determinations, which weakens conclusions drawn on such a group. They have, however, been the group which, because of greater intelligence and perseverance, has carried out the treatment faithfully. They also had the least evidence of arterial, arteriolar and kidney involvement, and in many instances suffered comparatively little disability from their hypertension.

"The evidence at the present time, that the liver extract is effective in certain cases of arterial hypertension, is very suggestive but is not conclusive."

#### **The Antipressor Fraction from Liver Tissue and Its Physiologic Action.**

Treating of this same subject and quite in harmony with the findings of Major, we have the report of work done by A. A. James, N. B. Laugh-ton and Bruce Macallum (J. A. M. A., 87:317, July 31, 1926).

"The physiologic effects of these extracts are entirely different from those of histamin and chlorin. There is no flushing, as is the case with histamin. The duration of the fall in blood pressure is much more prolonged than with histamin, lasting for several hours. Following the injection in experimental animals, there is no cardiac or respiratory change that can not be accounted for by the fall in blood pressure. A diminution of kidney and splenic volume following administration of the extract has been noted. The exact mode of action of these extracts is still obscure, but it is believed that the principal effect is on the small arterioles.

"Our clinical results with liver extracts to date have been gratifying. In some patients, the depression in blood pressure was very gradual, and the lowest point was reached many hours after the injection. In other cases the effect was immediate and persistent. At the present time, the clinical data accumulated are not exhaustive. Unfortunately the instability of the depressor principle under the most favorable conditions is such that the extracts have to be administered freshly prepared to insure the best results.

"As to the chemical nature of the depressor sub-

stance, we are as yet in ignorance. However, the effects of tetra-ethylammonium compounds on the blood pressure in dogs more nearly resembles those obtained by the use of liver extracts than do other depressor substances."

#### **Circulatory Tonics versus Circulation Depressants in Cardiovascular Renal Disease with Hypertension.**

To conclude the review we have selected an excellent practical paper by one of our own members, Clarence L. Andrews, (J. A. M. A., 87:928, Sept. 18, 1926) who deals with the problem from the clinical standpoint of accurate diagnosis and helpful therapy.

"About 10 years ago, while dealing with cardiovascular renal disease in patients who came to Atlantic City from many sections of the United States and Canada, I became very much interested in the observation of 3 prominent facts: First, it mattered not just what type of this group of diseases the individual was suffering from, one and the most talked about symptom and dread in his mind was his high blood pressure. When any explanation was offered in trying to point out that the increased blood pressure might be in his particular case a physiologic necessity, there was invariably no further interest shown. Second, it made very little difference also just what was causing the hypertension; the chief and foremost remedy furnished by the family physician in treating the case seemed to be the nitrites or circulatory depressants in some form. Third, in many instances in which the physician furnished a letter of instructions to the patient explaining the salient points in his case, he usually laid the greatest emphasis on the hypertension. Moreover, the systolic blood pressure reading alone was usually given, and no mention was made of the diastolic pressure, which many clinicians had begun to feel furnished perhaps more information concerning the circulatory strain than the systolic did.

"The wide and extensive use of the nitrites or circulatory depressants in hypertensive cases, without regard to type or cause, leads one to feel that there exists a widespread fear that the use of the digitalis bodies or circulatory tonics in these cases would raise the blood pressure still higher than it happened to be.

"In the face of this large group of patients with cardiovascular renal disease with hypertension, each one of whom presents a somewhat different clinical picture, yet many of whom depend on the nitrites or some form of circulatory depressant as his chief anchor of safety, one feels that if any single line of treatment can benefit all patients without regard to cause, it most probably is not the correct therapeutic stay in at least a few of them.

"This led me to make a second attempt to classify these cases of hypertension under group headings due to causes, in order to see if additional light might not be thrown on the subject.

"Using, therefore, the blood pressure readings as the motor expression of the circulatory apparatus in physiologic action, I have partially worked out the following groupings:

"(1) Hypertension without cause, with diastolic pressure less than 100, as reported by Riesman, of Philadelphia, which occurs in women about the menopause, and which tends to right itself as the menopause symptoms are alleviated.

"(2) Hypertension with a well sustained systolic pressure with a diastolic above 110, and whose diastolic falls to 100 or less and the systolic

also falls, when rest and eliminative treatment are carried out.

"(3) Hypertension with a well sustained systolic pressure and a diastolic above 110, whose systolic falls under rest and eliminative treatment, but whose diastolic remains at or above 110.

"(4) Hypertension with a systolic pressure not well sustained, but which vacillates from 10 to 20 points on the blood pressure machine as the pressure is taken, with a diastolic about 110, both of which come down under rest and eliminative treatment, but whose systolic begins to vacillate again following slight physical exertion and the diastolic goes back to about 110.

"(5) Hypertension with systolic pressure well sustained and with diastolic below 100, usually found in highly neurotic persons of both sexes and which responds very little to any form of treatment, but remains high in spite of all one can do.

"Group 1 represents a type of case that will usually take care of itself and should give us no special concern. The patients in group 2 evidently had a hypertension due to a toxic basis, which returned to within the normal when the bowels and kidney eliminated freely. Group 3 seems to show a definite increase in peripheral resistance due to real changes in the cardiovascular apparatus. Group 4 is encountered in that type of patient with slight hypertrophy and dilatation, with a resultant poorly toned-up heart muscle that needs support to increase its tone. Group 5 has some yet unexplained cause for the hypertension, which does not respond to treatment, and most probably has some endocrine imbalance as its background.

"We have noted the following observations:

"(1) There is abundant evidence that many treat hypertension as a disease itself.

"(2) There is a widespread fear that digitalis raises the blood pressure and should not be used in hypertension.

"(3) These cases can be partially classified by watching the blood pressure in conjunction with treatment results.

"(4) Tonic doses of digitalis should be given in hypertensive cases of long standing to support the heart muscle.

"(5) Patients with hypertension of long standing do better if the blood pressure is not lowered too much."

#### Worthy of His Hire.

A book agent, approaching a negro running an elevator, tried to convince him he needed a certain book on mechanical engineering.

"No, boss, don't want no books. Don't git no time fo' reading books," he drawled. "It takes all mah time to run dis elevator."

"But this book will help you to run your elevator. See here; there's a whole chapter here on elevators," persisted the canvasser.

"Don't want no help to run dis elevator," said the dinky. "Dis elevator runs all right now."

"But," said the canvasser, "This will help you run it better. You will know twice as much when you get through."

"No, boss," he said. "Why boss, I know more now than I git paid for."

#### Use No Hooks.

"Harold says that all he wants is a chance to express himself."

"Fine! Where to?"—(Judge.)

## County Society Reports.

### ATLANTIC COUNTY.

Joseph H. Marcus, M.D., Reporter.

The autumn activities of the Atlantic County Medical Society were inaugurated on the evening of October 8; there having been no meetings held during the summer months. Dr. D. Ward Scanlan, President, called the meeting to order at 8:30 and the minutes of the last meeting were accepted as read. The application of Dr. W. Blair Stewart, Jr., was presented to the society and was unanimously approved. The application of Dr. Ernest Shore was presented and referred to Dr. Walt P. Conaway, Chairman of the Board of Censors. The society voted to endorse the National Association plan for organization to meet the demands of calamity.

The Scientific Program was presented by members of the County Medical Society as follows: "Abscess of the Lung from the Standpoint of the Roentgenologist", by Charles B. Kaighn, Atlantic City; "Rhizomelic Spondylosis", by Myrtle Frank, of Egg Harbor; "Clinical Interpretation of Spinal Fluid Examinations", by R. Kilduffe, Director of Laboratories of the Atlantic City Hospital.

Dr. Kaighn presented the 4 modes of infection as follows: (1) By the air passages; bacteria and foreign bodies. (2) Contiguity. (3) Blood. (4) Lymphatics. Most postoperative abscesses are due to the causative agent finding entrance by way of the air passages. Of a series of 100 lung abscesses reported, 27 followed operations, and of these, 21 followed tonsillectomy, as stated by Wesler and Jackson. Dr. George Muller maintains that 50% follow operations, and of these, 50 to 75% follow tonsillectomy. A large percentage of foreign bodies that remain in the lungs produce abscess sooner or later.

Under the hematogenous group he numbered pneumonia among the causative agents. In describing the morbid anatomy of a lung abscess, one would find in the center an area of disintegrating lung, inflammatory tissue; surrounding which would be a second layer composed of solidified lung infiltrated with leukocytes and young connective tissue; the outer or third layer usually consists of edematous lung tissue. The onset of symptoms varies, due to the different causes, and if the abscess is deep-seated the physical findings are indefinite and are difficult to elicit. The x-ray examination is an invaluable aid in the diagnosis, and determination of location, size and progress.

Dr. Kaighn emphasized the necessity for co-operation between the roentgenologist and the internist or surgeon. He feels that aspiration should not be attempted as a means of diagnosis on account of the danger of soiling the pleura and producing empyema, which usually is fatal. Regarding active treatment, the procedure is similar to that of abscesses situated elsewhere, the object being to obtain drainage and conserve the life of the patient. He enumerated the following procedures: (1) Postural drainage; (2) rest in bed; (3) diet; (4) vaccines, which should be autogenous and made from material obtained through a bronchoscope, (which vaccine should not be used in the acute stage); (5) diathermy, of doubtful value; (6) drugs to stimulate the appetite or to combat anemia, (don't use sedatives for the cough, except to insure sleep, for stopping the cough is interfering with excellent means of drainage); (7) bronchoscopic treatment has a distinct field; (8) surgical treatment, consisting in drainage.



Dr. Kaighn concluded with the following on prognosis: A successful outcome depends upon resistance of the patient, the nature of the organism, location of the abscess, and whether due to foreign body.

The Scientific Program was continued by Dr. Myrtle Frank, of Egg Harbor, with a dissertation on "Rhizomelic Spondylosis", and a presentation of 2 cases. Following a resumé of the literature which the author covered thoroughly, he presented the following case:

Adult, male. Mother died of cardiorenal disease. Father suffered with spondylosis deformans, and died, at the age of 86, of bronchopneumonia. One brother, following an attack of rheumatic infection, developed "Old Man's Stoop" at the age of 25.

Past history: Rheumatic infection in left hip, in December, 1909, when that hip was injured by an explosion. Present illness began with the above accident, following which he had hospital care for 1 year without improvement. The disease extended to the spine, which later became somewhat stiff and there followed subcostal pain on both sides, extending around body like a girdle. Pain in kidney, somewhat interfering with urination. Neither pain was affected by pressure and his leg and thigh were devoid of feeling. In December, 1910, his left hip was ankylosed. Lumbar curve was obliterated; up to the ninth dorsal the spine was rigid, deviating to the right side and presenting a scoliosis. No remedies proved effective and the therapeutic test for lues was negative. Condition remained about the same, until 1913, when he consulted Dr. Frank for infected tonsils. In a short time ankylosis incident to the cervical region occurred also at the right hip. In 1916, following an attack of gastro-intestinal disease due to meat, both scapulohumeral articulations became involved. An attack of influenza with pneumonia, in 1922, did not influence the disease.

Present condition: Undernourished male. Head can only be slightly moved sideways in up and down motion. Pupils equal and react to light and accommodation. There is a pyorrhea present. Throat, heart, lungs and abdomen negative for findings of importance. The left hip is immobile, the right hip  $\frac{1}{4}$  in. extension, with grating of the left knee. Normal right knee in position of flexion, due to the tilting of the pelvis. There is some loss of extension of the ankles. The right arm can be elevated to a right angle; left elbow not more than 6 in. from the chest. Both elbows, wrists, and fingers retain full functional powers. Chest is compressed from side to side. Upper ribs in front connected with cartilage at an acute angle. On inspiration left half of chest expands  $\frac{1}{2}$  in.; the right being immobile. Spine painless, but rigid from coccyx to the axis. Pelvis distorted with normal curves obliterated. Whole trunk bowed forward in the direction of the face at an acute angle toward the ground. Walking difficult, but not painful; usually employs cane or crutches. Walks up steps sideways and enters a car backward. (This patient was exhibited).

Case No. 2 was more or less similar in physical signs and history, the second patient being a half brother to the first. Patient born in 1896. Dr. Fank's conclusions were as follows: There is probably an hereditary familial maladjustment, as all male members of the family are affected. The first boy showed intermissions of disease, which would again become active with a new form of infection. Pain not due to a true neuritis, as pressure does not affect it, neither does calcification around nerve roots seem to be a cause

as when kyphosis was established pain disappeared. The disease seems to be an entity, distinct from arthritis deformans, as joints of small bones are not affected.

Dr. Charles P. Kaighn, roentgenologist to the Atlantic City Hospital, demonstrated the x-ray findings of these cases.

The program was concluded with the "Clinical Interpretation of Spinal Fluid Examinations", by Dr. Robert A. Kilduffe, Director of Laboratories. (This paper will be published in full in an early issue of the Journal.—Ed.)

These papers were discussed by Drs. Martin, Miller, Kilduffe, Carrington, Scanlan, and other members. A rising vote of thanks was extended to the speakers of the evening for their splendid and comprehensive presentations.

#### Atlantic City Hospital Staff.

Joseph H. Marcus, M.D., Secretary.

The regular monthly meeting of the Atlantic City Hospital Staff was held in the auditorium of the Nurses' Home, Friday, October 16, at 8:30 p. m. The meeting was called to order by Dr. Richard Bew, President, with the following members in attendance: Drs. Bew, Senseman, Davidson, Scanlan, Darnall, Kaighn, Marcus, Pilkington, Bossert, Harley, Carrington, Rosenblatt, Kilduffe, Matheson, Ratcliffe, Rosenberg, Cheeves, Summer, Hyman, Irwin, Sinkinson, Winn, Ireland, Brown, Poland, Fish, McGeehan, Uzzell, Pennington, Shivers and Subin.

The minutes of the previous meeting were read and approved. Dr. Theodore Senseman, reporting for the building committee of the new hospital, stated that the progress made up to the present was commendable and that within a short period of time certain parts of this new institution would be ready for occupancy. He also reported as Chairman of the Training School Committee. Dr. W. J. Carrington, Chairman of the Intern Committee urged upon all members the more intensive study of certain types of cases with the resident physicians. The matter of the length of intern service was referred to the chairman, Dr. Carrington, for final disposition.

A communication was read from Dr. W. B. Stewart, Jr., in which he applied for the position of assistant to the dispensary clinic in the outpatient department. Dr. Bew and Dr. Marcus highly recommended Dr. Stewart, and the communication was referred to the Board of Governors for action at the annual meeting. Dr. C. H. Shivers recommended the appointment of Dr. Daniel Reynor as assistant in the genito-urinary department pending his approval by the Board of Governors. It was moved and properly adopted that the above mentioned applicants be appointed as temporary assistants, pending the annual meeting referred to.

The scientific program was instituted by Dr. William Edgar Darnall reporting for his Gynecologic Service. Briefly presenting statistics, Dr. Darnall stated the following: 98 patients admitted, of whom 87 were operated upon. The total number of operations, 132, with a mortality of 2.3%; the 2 deaths occurred in moribund female patients presenting abdominal pathology which necessitated immediate operation.

The following case report was presented by Dr. Darnall, together with a very comprehensive and interesting dissertation on "Bilateral Ectopic Kidneys, with Case Report of 10 Similar Conditions."

This case is interesting because of some rather unusual features. She is an unmarried female,

38 years of age. Her father died of hemiplegia, her mother is living. She says she never has been sick except for an acid indigestion. Her weight is 120 lb. She has an occasional headache, no backache, is constipated. Her heart and lungs present no abnormalities. Her urine is normal, blood Wassermann negative. The menstrual periods appeared at the age of 12, and have been regular, coming a little in advance of the 28 day cycle and always associated with dysmennorrhea. She flows rather freely and for the past year or two has suffered with a severe menorrhagia; at times the hemorrhage is so severe as to seriously deplete her blood. The vagina and cervix are normal but the uterus is small in size and hard. She underwent an operation in another clinic 3 years ago, at which time the right tube was removed and the right ovary resected. She was told she had no left tube or ovary.

In order to relieve her excessive flow, x-rays were used, 6 or 7 exposures being made. This instead of relieving the condition, rather aggravated it. It was then decided to do a hysterectomy. On opening the abdomen the uterus was seen to be hard and small, almost infantile in type. The right tube had been removed and the right ovary implanted in the cornua, which presented a smooth rounded appearance. Over on the left side skirting the rim of the pelvis was a tube, normal in size and a rather shrivelled ovary. Attached to the proximal end of this tube was a cord-like structure somewhat enlarged at its upper end and between this and the uterus proper the border of the broad ligament, which was the only connection it had with the uterus proper, was smooth and even. The 2 structures were separated by at least  $3\frac{1}{2}$  in. This was evidently the vestige of a secondary uterus. Malformations of the uterus result either from faulty or incomplete fusions of, or from arrested development of the ducts of Müller. In the present case the right half developed into a functioning uterus, but the development of the left half was arrested and it remained only a vestige, although its corresponding tube was developed to normal size. It is rather extraordinary that these 2 structures should be so widely separated.

There was a mass at the left of the rectosigmoid junction which did not seem to be inflammatory in character; the peritoneum sliding easily over it. On opening the posterior peritoneum the mass was seen to be a kidney, somewhat undersized; a true case of pelvic kidney. Pelvic kidney does not mean the ptosis of a normal kidney but is considered to be congenital. The ureter was short. The location of this kidney in this position explains the character of pain the patient had suffered from as told in her history. She stated that often at stool she was seized with a severe pain while defecating, severe enough to cause her to faint. It would be unwise to attempt to fix this kidney, doing a nephropexy; the ureter was not long enough to justify it. Since she possesses a good kidney on the right side and her 'pthalein function is above 50%, the kidney was removed.

A discussion of Dr. Darnall's presentation followed by Drs. Carrington, Shivers, Bew, McGeehan, Ratchliffe, Scanlan, Brown, and others.

Due to the facilities offered by the Nurses' Home for conducting meetings, it was unanimously recommended that future meetings be held there. A motion was made and duly seconded that the activities of the county medical society in its propaganda and efforts for limiting infec-

tion be heartily approved by the Atlantic City Hospital Staff.

It was recommended by Dr. Carrington that certain medical journals for the use of the resident physicians be purchased. The following selection was made: Journal of the American Medical Association; American Journal of Diseases of Children; American Journal of the Medical sciences; British Medical Journal; Journal of Obstetrics and Diseases of Women; Surgery, Gynecology and Obstetrics.

## BERGEN COUNTY.

H. B. Wolowitz, M.D., Reporter.

On October 12 the Bergen County Medical Society held its regular annual meeting together with dinner at the Swiss Chalet, Rochelle Park. The guest of honor was Dr. S. E. Armstrong, of Rutherford.

Resolutions on the deaths of Doctors Adams, MacDonald and Beveridge were accepted:

"The Bergen County Medical Society regrets its unavoidable delay in making official mention of the death of Dr. Charles F. Adams on April 21, 1926.

Doctor Adams, up to his last illness, was one of the oldest members of the society in active practice, one term its President, during which he served with eminent ability, and always active in promoting its interests.

Trained in the school of homeopathy he was a consistent believer in its potencies of high and low degree.

His college training was plainly apparent in his felicities of speech, his breadth of mind and his command of classical allusions to beautify and strengthen his spoken and written language, while facetiousness smoothed the rough edges of a seeming sternness of dignity.

The society hereby records its sense of loss in the death of Dr. Adams and offers its sympathy to his bereaved family."

The above was read by Dr. Pratt.

"Whereas, it has pleased God in his infinite wisdom to take from us one of our members, Harry G. McDonald, and

Whereas, he has been a faithful member of this society for many years and devoted to its interests.

Be it resolved, that this tribute to his memory be spread in full upon the minutes of this society and

Be it further resolved, that a copy of this resolution be sent to his family."

Michael Sarla, Chairman.

D. A. Curtis,

P. R. McFeely.

"Mrs. M. B. Beveridge,

Teaneck Rd., Teaneck, N. J.

Dear Mrs. Beveridge:

The Bergen County Medical Society extends to you its heartfelt sympathy for the loss you have sustained in the death of your husband, and wishes to express our regret that we could not have known him personally and more intimately, as we feel that he would have proven to be a valuable member of the society. We trust you will have comfort in the knowledge of his character and accomplishments.

Sincerely,

H. Trossbach, M.D.,

Committee."



Dr. Spencer T. Snedecor, of Hackensack, was elected to membership, and the transfer of Dr. E. E. Sawyer, of Hackensack, from the Essex County Society was accepted.

The dinner was a splendid success from both the social and gastronomic aspects.

Dr. Sullivan, President of the society, acted as toastmaster. He called first upon Dr. Pinneo, who spoke about the State Society's group insurance plan urging immediate action. Dr. McBride spoke urging coöperation with the state welfare committee in health legislation. Dr. Pollak, of Hudson County, spoke forcefully on medical ethics, ideals, and aspirations. Dr. Clock, of Rockland County, N. Y., and Dr. Pratt, of Bergen County, N. J., each made a few remarks.

Dr. S. E. Armstrong, in whose honor the dinner was given as a surprise, was the next speaker. The substance of his remarks follow:

This, I will have you understand, is not my swan song, for I intend to continue in active practice as long as I am physically able.

In 1835 I came to Passaic County and joined its medical society. Three years later I moved to Rutherford, in Bergen County, and soon became a member of the Bergen County Society. I have never regretted my connection with either society.

Inasmuch as this honor has been given me as a complete surprise, I am not well prepared to speak, so do not hold me too strictly accountable for what I may say.

Since my early days science has greatly advanced, for example, appendicitis as an entity was hardly known in 1885. Advancement and the support of medicine before '85 came only from physicians. It was not until later that lay people began to give money and support. They did this not because they had any special love for the profession, but to help their fellowmen.

The Bergen County Society should be a great society in this state, for it is well located, near a great medical center, and excellent speakers can easily be gotten. It all depends on trying, and on attending meetings well.

Thank you very much for the honor you have conferred upon me. It was most unexpected.

#### Hackensack Hospital Staff.

Spencer T. Snedecor, M. D., Reporter.

The Associated Physicians of the Hackensack Hospital held their monthly meeting on October 18, with Dr. D. Corn, the President, in the chair.

Dr. F. S. Hallett reported for the Library Committee that they hoped to have the G. Howard MacFadden Memorial Library completely installed within the week.

On the mortality of the month the chart committee had selected the following cases for discussion:

"Lysol Poisoning", Dr. S. E. Armstrong, of Rutherford; "Intestinal Obstruction", Dr. Michael Sarla, of Hackensack; "Secondary Hemorrhage from Gall-Bladder after Cholecystostomy", Dr. Louis Greenberg, of Lodi; "Tetanus", Dr. Flora Adams, of Hackensack; "Acute Enteritis in Baby", Dr. Harriet Knox, of Hackensack; "Extra-Uterine Pregnancy", Dr. D. Corn, of Ridgefield Park.

Dr. Armstrong discussed his case of lysol poisoning. Patient was admitted to hospital 1 hour after swallowing a large amount of lysol. She was in shock and unconscious, which made gastric lavage necessary, although in general it is contraindicated. The stomach was first wash-

ed out with bicarbonate of soda solution and then alcohol. A quantity of egg white was left in. Four hours later the patient regained consciousness and rallied. However, severe toxemia gradually set in and she died 3 days later. The urine became very bloody and full of albumin.

Dr. Sarla reported that his case of intestinal obstruction occurred in a female, age 47, admitted to the hospital complaining of vomiting, constipation and abdominal distension. For some weeks patient had not had a normal bowel movement, while her abdomen had been slowly increasing in size. For 10 days she had taken only small amounts of food and 3 days' previous to admission began vomiting. Rectal examination revealed a large mass rather low down in the rectum. An x-ray of a bismuth enema showed complete obstruction about 6 cm. above anus. Diagnosis was intestinal obstruction probably due to carcinoma of rectum. Under spinal anesthesia, a colostomy was performed. Patient went to sleep during operation and did not regain consciousness; died 12 hours later.

In the general discussion 2 possible reasons for the rather sudden termination were suggested: sudden dilatation of the splanchnic vessels due to the spinal anesthesia, or sudden collapse from the long absorption of intestinal toxins.

Dr. Adams' case of tetanus was due to a crushing injury of 2 fingers 2 weeks' previously, which had received no medical attention. On admission the patient complained of pain in the muscles of the back and difficulty in opening the mouth. The body was cyanosed, very rigid, head retracted and jaw fixed. The slightest sensory stimulation caused a severe spasm. 20,000 units of antitoxin were given intravenously and 30,000 intraspinously at once. The following day the patient received 10,000 units both ways and again on the third day. Magnesium sulphate solution intravenously (20 c.c. of 10% solution) seemed to relieve the spasms for a while but later, on the third day, patient died in a convulsion.

Dr. Greenberg discussed his case of hemorrhage from ulceration of the gall-bladder as a rare occurrence. About 2 months after a cholecystostomy the patient had a fatal hemorrhage, blood gushing up from the sinus tract and when that was occluded continued down the biliary ducts to fill the small bowel until the patient was exsanguinated. Postmortem examination revealed an ulcer of the gall-bladder near the cystic duct. No stones were present.

Dr. Harriet Knox gave a general summary of acute enteritis in children, in connection with her case report.

Dr. D. Corn told of his case of extra-uterine pregnancy that failed to rally postoperatively. He then reviewed the principle points of symptomatology and diagnosis in this disease.

#### BURLINGTON COUNTY.

R. I. Downs, M.D., Reporter.

The ninety-seventh annual meeting of the Burlington County Medical Society was held at the St. Mary's Guild House, Burlington, on October 13, at 1:00 p. m. There were 27 members and guests present with the President, R. I. Downs, in the chair. The guests were Dr. William C. V. Wells, of Delanco; Dr. E. Warren Rodman, of Beverly; and Dr. Frank W. Pinneo, of Newark.

There were 4 applications for membership in the society. The above mentioned Drs. Wells and Rodman, with Dr. F. D. Fahrenbauch, of Mt. Holly, and Dr. D. H. Lafavor, of Palmyra.

Drs. Russell D. Geary, of Riverside, and Andrew Smith, of Mt. Holly, who were previously elected to membership, signed the constitution.

The annual election of officers then took place. The Auditing Committee, Drs. Rogers and Thorne, found the Treasurer's Report correct.

The Nominating Committee, composed of Drs. Newcomb, Marcy and Ulmer, presented to the society the following names for approval and they were unanimously elected: President, B. K. Brick; Vice-President, Richard Anderson; Secretary and Treasurer, George T. Tracy; Reporter, R. I. Downs; Censor, D. H. B. Ulmer; Delegates to State Society, Edgar Haines and A. L. Gordon; Alternates to State Society, H. W. Bauer and R. I. Downs; Member of Nominating Committee of State Society, M. W. Newcomb; D. F. Remer; Delegates to Camden County Medical Society, H. C. Curtis and Nathan Thorne; Delegates to Atlantic County Medical Society, Harry Rogers and E. R. Mulford; Delegates to Cape May County Medical Society, Alexander Marcy and Joseph Stokes; Delegates to Gloucester County Medical Society, B. P. Powell and Joseph Kuder; Delegates to Salem County Medical Society, G. T. Tracy and G. H. Wilkinson; Chairman Section, Practice of Medicine, January Meeting, H. L. Rogers; Surgery, April Meeting, Andrew Smith; Obstetrics and Pediatrics, June Meeting, J. M. Davis.

A committee composed of Drs. Joseph Stokes and Emma Weeks Metzger presented the following resolution on the death of Dr. George E. Harbert:

"We wish to record with great sorrow the tragic death of our fellow member, Dr. George Eugene Harbert, who died on November 12, 1925, as a result of an automobile accident. Dr. Harbert had been a member of our society since 1902 and had earned the respect of all our members. He occupied the position of President in the year 1916.

Dr. Harbert was born in Mt. Holly, May 22, 1876; graduated from Peddie Institute in 1895, and received his medical education at the University of Pennsylvania, graduating in 1899. He located in Beverly in 1908 where he soon built up an extensive practice. He was a member of the New Jersey State Medical Society and the American Medical Association, also the Philadelphia Medical Club. He served as school physician in Beverly for several years.

We feel that in his death, this community as well as our society has lost a valued and respected member and we desire that this minute be transmitted to his family as a testimonial of our high regard."

The resolution of Dr. Joseph Stokes, presented and discussed at the last meeting, to change Chapter I, Section 1 of the by-laws of the society was passed. Section 1 now reads:

"The Society shall judge of the qualifications of its members but as it is the only door to the Medical Society of New Jersey and to the American Medical Association for physicians within its jurisdiction, every reputable and legally qualified physician in Burlington County, who has been engaged in the practice of medicine for the period of one year in said county, and who does not support, practice, or claim to practice sectarian medicine shall be entitled to membership. The addition of one year of practice in the county, however, will not include the present applicants."

The letter from Dr. Reik to the County Society Presidents explaining and recommending the organization of the Woman's Auxiliary of each county medical society was read. Dr. Mul-

ford favored it strongly. The society voted its coöperation and gave the President power to proceed with the movement.

The letter from Dr. Reik explaining his educational program for the coming year was read. The society members wish to aid in the above program both individually and collectively when possible.

The Reporter, Dr. Downs, spoke of the remarkable improvement of the State Journal as a result of the efforts of Dr. Reik. The work of the reporter is not only to fully report each meeting but he should also report any interesting or instructive medical news arising between meetings. Each member can aid the Journal by forwarding any news items to the reporter.

Dr. Frank W. Pinneo, Chairman of Committee on Life, Accident, and Health Insurance of the State Society, addressed the meeting and explained fully the question of Group, Life, Health and Accident Insurance, now under discussion. Many questions were asked him. The members appeared exceedingly interested in the subject and gave Dr. Pinneo a rising vote of thanks in appreciation of his presence.

The President's Annual Address was then delivered. The subject taken was: "Efficiency and Keeping Fit in General Practice". It was received very graciously by the members. (The Address will be published in an early number of the Journal.—Ed.)

Dinner followed and the meeting adjourned to reconvene in Mt. Holly in January.

#### CAMDEN COUNTY.

Grafton E. Day, M.D., Reporter.

The annual meeting of the Camden County Medical Society was held at the City Dispensary on Tuesday, October 12, 1926, at 3 p. m., Dr. A. M. Elwell in the chair.

After reading of the minutes, Dr. J. B. Morrison, Recording Secretary of the State Medical Society, was introduced and explained the proposed group life and health insurance, the advantageous and exceptional conditions offered in these contracts, and said he thought the offer should receive the support of all members of the State Society; some of the advantages of this policy are its participating dividends and the non-cancelable character of the health and accident policy.

Dr. Reik, the Executive Secretary and Editor of the Journal, endorsed the health and life insurance proposition and called attention to the fact that the members of the State Society, through group action, are now enjoying the best malpractice insurance policy that is procurable in this country, and that they only had to act co-operatively to secure similar benefits in respect to health, life and accident insurance.

A vote of thanks was given Dr. Morrison and Dr. Reik for the clear presentation of this matter.

Dr. Joseph Crowley was admitted to the society by transfer from Lebanon County, Pennsylvania, and Dr. Charles R. Hutchinson, of Westfield Avenue, Camden, was elected to membership. Two applications for membership were read and referred to the Board of Censors.

The report of the Nominating Committee was then called for and the following named officers were duly nominated and elected: President, Alfred Cramer, Jr.; Vice-President, T. A. Madden; Secretary, Thomas B. Lee; Assistant Secretary, Joseph E. Roberts, Jr.; Treasurer, J. E. L. Van Sciever; Reporter, Grafton E. Day; Historian, David F. Bentley, Jr.; Censor, J. W. Marcy; Trustee, Joseph E. Hurff; Committee on Scientific



Work; George P. Meyer, Chairman, T. K. Lewis, Paul T. Young. Committee on Arrangements: Ernest G. Hummell, Chairman, Beulah Hollinshead, W. H. Haines. Delegates to Medical Society of N. J.: R. E. Schall, J. P. Brennan, J. E. Roberts, Jr., L. H. Ewing. Delegates to Atlantic County Medical Society: P. M. Mecray, A. B. Davis, W. Jennings. Delegates to Burlington County Medical Society: I. E. Deibert, E. W. Ros-sell, B. F. Buzby. Delegates to Cap May County Medical Society: D. F. Bentley, Jr., E. F. Harris, T. E. Hughes. Delegates to Cumberland County Medical Society: A. T. Eaton, H. F. Palm, Marcus K. Mines. Delegate to Gloucester County Medical Society: Emma Richardson, M. M. Osmun, W. W. Kain. Delegates to Salem County Medical Society: T. M. Kain, L. C. Lyon, A. Macalister. Nominating Committee of State Society, 1927: A. Haines Lippincott; Nominating Committee of County Society, 1927: J. Lynn Mahaffey, Chairman, H. F. Palm, J. E. Howard.

The report of the Treasurer, having been audited and found correct, was approved.

Resolutions were presented from the Camden City Medical Society in which was set forth the relations existing between the City and the County Medical Societies, and proposing that the City Society shall meet hereafter not oftener than 4 times a year, provided the County Society shall accept the following proposals: (1) That monthly meetings be held in the evening; (2) that an Executive Committee be appointed to transact the routine business of the society and only report such matters to the society as a whole for approval; (3) that the major part of each meeting be devoted to presentation and discussion of scientific matters.

After discussion of these proposals it was decided that the county society shall hereafter hold monthly meetings, and an amendment to the Constitution was presented to make the change necessary to provide for these monthly meetings; this amendment to be acted upon at the December meeting which shall be called for 8:30 p. m., and the business portion disposed of promptly so that the scientific program may be taken up at 9 p. m. sharp.

Dr. James Hunter, of Gloucester County, spoke of the more active interest in meetings during the past year in the Gloucester County Society since the time of meeting was changed from afternoon to evening meetings; he believed there had been some increase in attendance.

Dr. Elwell then delivered the Annual Presidential Address, his subject being "Preventive Medicine"; a practical, helpful and enlightening paper.

Dr. MacAlister extended an invitation to members of the society to attend the annual meeting of the New Jersey Tuberculosis League to be held at the Hotel Walt Whitman, Camden, October 21 and 22.

Dr. Alfred Cramer was then inducted into office as the newly elected President and adjournment was taken to the dining room, where dinner was served.

#### CAPE MAY COUNTY.

Eugene Way, M.D., Reporter.

The annual meeting of the Cape May Medical Society was held at Woodbine Colony on Tuesday, October 19, 1926, with the President, Dr. George F. Dandois, in the chair, and 24 members in attendance.

The following officers were elected for the year 1927: President, George F. Dandois; Vice-Presi-

dent, Herschel Petitt; Secretary and Reporter, Eugene Way; Treasurer, H. H. Tomlin; Member Nominating Committee of State Society, C. W. Way; Censor, W. P. Haines; Annual Delegate, Frank R. Hughes; Alternate, Herschel Petitt; Committee on Public Health, Welfare and Legislation, Julius Way, Millerd Cryder and W. A. Lake.

Announcement was made that Dr. Green, President of the State Medical Society, had appointed Dr. Eugene Way a member of the Welfare Committee of the State Society.

The society by a hearty and unanimous vote elected Dr. Henry O. Reik an Honorary Member.

Professor S. F. Gilpin, of Philadelphia, gave an address on "Nervous and Mental Diseases of Interest to the General Practitioner" and was voted the thanks of the society. Discussion was opened on Dr. Gilpin's paper by Dr. Glendon, of Bridgeton, and participated in by Dr. Moore, of Bridge-ton, and others.

Dinner was served by the chef of the Colony, and the Institution was inspected by the society.

It was voted to hold the next meeting at Egg Harbor Inn, Beasley's Point, at which time a Ladies' Auxiliary Society will be organized.

#### CUMBERLAND COUNTY.

E. S. Corson, M.D., Reporter.

The annual meeting of the Cumberland County Medical Society was held at the Commercial Hotel, Bridgeton, Tuesday, October 5. The subject of Group Insurance was discussed, but there seemed a general lack of interest in the proposition. The election of officers resulted in the choice of H. H. Wilson, President; J. C. Knowles, Vice-President; E. C. Lyon, Secretary; H. H. Wilson, Treasurer; Charles M. Gray to Board of Censors; E. S. Corson, Reporter; H. E. Lore, Annual Delegate to the State Society; Alfred Cornwell, State Nominating Committee.

Dr. H. Garrett Miller, having served the Society 19 years as secretary felt that some younger member should take his place, whereupon a vote of thanks was given him and a committee appointed to present a suitable testimonial to him and Mrs. Miller, who had so ably assisted him in the office.

Dr. E. J. Klopp, of the faculty of Jefferson Medical College, gave a very interesting address on "Diseases of the Lower Bowel and Rectum, Their Diagnosis and Treatment".

The majority of these diseases can be handled by the general practitioner. The patient is not properly examined in many cases. Guessing days are past. Always insist on a thorough examination.

The chief causes of pain in the anal region are herpes, eczema, fistula, constipation and nervous irritation depending on the menopause. Throbbing pain is always present in strangulated hemorrhoids; fissure in ano causes pain on defecation; tenesmus results from a foreign body in rectum, especially a polyp. In any operation, loss of control of the external sphincter is to be avoided. In cases of fissure, anesthetize, cut a few fibres of the sphincter and apply silver nitrate. Small hemorrhoids may be removed with clamp and cautery. The modified Whitehead is the best operation. In case of prolapse of the rectum, the Moscovitz operation gives the best results. Stricture of the rectum is rare in the white race; more frequent in colored people; syphilitic stricture is not infrequent; eliminate by Wassermann test. If found, treat lues first. Colostomy best in

high ulcerations. Kraske operation too formidable.

The annual picnic held at Fortescue was a decided success.

### ESSEX COUNTY.

Alfred Stahl, M.D., F.A.C.S., Reporter.

The one hundred and eleventh annual meeting of the Essex County Medical Society was held Tuesday evening, October 5, 1926, at the Academy of Medicine of Northern New Jersey, at Newark, with the President, Elmer D. Wherry, in the chair. The Secretary read the minutes of the previous annual meeting and they were approved as read.

Dr. R. G. Rogers read his Treasurer's Report, which showed the society in excellent financial condition. Dues for the coming year were placed at \$13.00.

Dr. Charles D. Bennett, with his usual sympathetic reference, read the obituaries of George H. Cobb, James M. Maghee, George B. Witt, and Armin Fischer, who have answered their last summons.

The following officers were elected: President, Sanford Ferris; Vice-President, Max Danzis; Reporter, William M. Rathgeber; Secretary, Frank W. Pinneo; Treasurer, R. H. Rogers; Councilors for 2 years, Ambrose Dowd, Henry Barkhorn, Alfred Stahl and Elbert S. Sherman; H. Roy Van Ness was elected Councilor to fill the unexpired term of Max Danzis.

Dr. Elmer G. Wherry delivered his Presidential Address and chose for his subject "Certified Milk", which is almost synonymous with the name of Henry L. Coit. Dr. Wherry paid a great tribute to Dr. Coit, the pioneer for clean and better milk, and to the lasting national and international reputation of the founder of certified milk.

Caterer Davis, who has served collations for the Essex County Society since the memory of the oldest members runneth not to the contrary, served his delightful supper, and over the cigars, the usual yarns were spun and good fellowship prevailed.

The following were elected to full membership in the society: Marc C. Angelillo, Harry A. Brotman, Anthony B. Cucinella, Harold H. Fischman, Hyman Friedman, Nathan James Furst, Oscar Glass, M. H. Greifinger, S. C. Husbands, Michael J. Kaufman, Joseph P. Klenk, Jos. S. Lordor, Francis J. McCauley, Joseph J. Olini, Charles F. Restaino, Saival L. Rosenstein, Archibald R. Saporio, Ralph Niel Shapiro, Ellis L. Smith, Alfred W. Snedeker and Allan P. Walden.

### GLOUCESTER COUNTY.

Henry B. Diverty, M.D., Reporter.

The regular monthly meeting of the Gloucester County Medical Society was held at the Woodbury Country Club, October 21, as the guests of Drs. E. E. Downs and F. B. Buzby, of Swedesboro.

An excellent paper was presented by Dr. Wells, of Hahnemann College, upon the subject: "The Significance of Pain About the Heart". Dr. F. B. Buzby, Jr., of Camden, gave an interesting talk on "Backache".

Delegates from Camden County were among the guests, they being Drs. T. W. Kain, M. M. Osmon, and F. B. Buzby, Jr. of Camden, and Dr. Phillips, of Collingswood. Votes of thanks were extended to Dr. Wells and Dr. Buzby for their work, the paper and talk having been taken down

by a stenographer for the permanent records of the Gloucester County Society.

Among the physicians present at the meeting last night were: President (Wilson Stout, Wenonah; R. K. Hollinshed, Westville; Oran Wood, H. L. Sinexon, and C. C. Sheets, Paulsboro; C. I. Ulmer, Gibbstown; S. F. Ashcraft, Mullica Hill; E. M. Duffield, Glassboro; C. F. Fisler, Clayton; H. B. Diverty, J. H. Underwood, Duncan Campbell, William Brewer, David Brewer, H. L. Sickel and Dr. Nelson, of Woodbury, and F. B. Buzby and E. E. Downs, of Swedesboro.

A vote of thanks was extended to Drs. Downs and Buzby for their hospitable entertainment.

### HUDSON COUNTY.

M. I. Marshak, M.D., Reporter.

The October meeting of the Hudson County Medical Society was held on Tuesday evening, October 5, at 8.30 p. m., with Dr. William Friele presiding.

Drs. G. Ginsberg, C. B. Kelley, C. J. Larkey, H. Spence and C. V. Niemeyer were elected unanimously to the Nominating Committee.

The resignation of Dr. T. R. Chambers as a Permanent Delegate was received and accepted with regrets.

Dr. Morrison, the Secretary of the State Society, informed the society that because of increase in membership, it was entitled to 5 more Permanent Delegates. He also discussed the advantages of the State Society's group life and health and accident insurance plan.

Dr. L. F. Garriques, of New York, read a paper on "A New Specific Electric Treatment for Heart Affections". The aim of this treatment was to contract the heart down to its normal size and keep it so. It consists of passing 700 milliamperes of high frequency current through electrodes placed over the region of the seventh cervical vertebra and over the cardiac area. The treatment should be given every 3 to 4 days at first, then at lengthened intervals. The only counter indication for its use is angina pectoris, in which the current might excite an attack. His conclusions were: (1) Dilated hearts are returned to normal size and kept so. (2) The treatment is pleasant to patients. (3) It is tonic in action; inexpensive and not difficult to apply. He cited cases and showed some x-ray plates to prove his claims.

### Osler Clinical Society.

M. I. Marshak, M.D., Reporter.

The Osler Clinical Society met at the Union League Club on October 20, with Dr. A. E. Jaffin presiding.

Drs. I. Pyle and H. Franklin reported a case of a female aged 50 who for 5 months had been losing weight steadily—in all she had lost 100 pounds—who complained of a burning pain in the epigastrium, chills, fever and sweats, which came in waves of 1 to 2 weeks' duration. Examination showed an enormously enlarged liver outline, a slight systolic murmur at the cardiac apex transmitted to the axilla, a few râles at the bases of both lungs and a temperature chart with a septic graph up to 104-105° for about a week followed by a week or two of a range between 99 and 100°F. The laboratory findings included a sputum negative for tubercle bacilli; a negative urine; Wassermann, both blood and spinal fluid, negative; repeated blood cultures negative; Widal negative; and absence of malaria organisms. An exploratory operation was performed which dis-



closed a liver filling both domes of the diaphragm and most of the upper abdomen. It was light chocolate in color with numerous evenly distributed nonelevated spots. Section showed distinct tubercle formation with giant cells and marked fatty degeneration of the liver cells.

Dr. A. E. Jaffin presented the history of a male patient aged 69, who since March, 1925, had periodic attacks of epigastric cramps with anorexia, some vomiting and chilly sensations, occasional diarrhea, and purpura on his legs. Examination showed a movable nontender mass filling the upper half of the abdomen. A barium enema went up as far as the mass and stopped there. The patient was given a hypodermic of morphia and in 2 days the mass had disappeared and the barium went through to the cecum. These symptoms and signs came and went at intervals for about 1 year. The phantom tumor always clearing up after morphin. Later x-ray studies showed some filling defect in the cecum which remained constant. As attacks were becoming more frequent an exploratory operation was advised. This showed a large intussusception which was easily reduced. The cecum was retracted and puckered, without tumor, though there was some thickening. The cecum was resected and presented a shallow ulcer on a hard base with no overhanging. On section, this proved to be cancerous.

Dr. Jaffin also showed the specimen of gall-bladder removed from a young woman, which contained 2 large cholesterin stones.

Dr. M. I. Marshak showed x-ray plates illustrating chronic miliary pulmonary tuberculosis, acute miliary pulmonary tuberculosis, and "post-gassing" pulmonary changes.

Drs. Pollak, Bartone, Rosenstein, H. Franklin and Jaffin discussed these case reports.

Dr. Immanuel Pyle read a paper on "Advanced Acidosis and Coma in Diabetes", and presented a case for illustration. This type of case must be institutionalized in order to obtain the frequent blood and urine studies and treatment required. The purpose of treatment is: (1) To reduce the blood sugar (insulin); (2) to reduce the ketone bodies (insulin); (3) to eliminate the ketone bodies, with sodium bicarbonate, forced liquids and flushings. These cases usually come in with blood sugar of over 300,  $\text{CO}_2$  40 with 4+ sugar, acetone and diacetic acid in the urine.

At first 100 c.c. of orange juice are given every 20 minutes, preceded by 5 units of insulin. Drinking of water is encouraged. If at the end of 24 hours the blood sugar is not reduced, increase the amount of insulin. At the end of 72 hours, the orange juice regimen is stopped and a soft diet consisting of 30 gm. of carbohydrate, 30 of fat and 30 of protein, is given in 3 meals, with insulin t.i.d. As blood sugar decreases the dose of insulin is also decreased, until the patient is receiving a maintenance diet of between 40 to 45 calories per kilogram of body weight. The personal equation should be considered. The diabetic should be fed until the patient is satisfied, sufficient insulin being used to keep the urine free of sugar and the blood sugar normal. Whether it is necessary to continue insulin for the rest of the patient's life is not yet known. The longer a diabetic is sugar free, the higher will be his carbohydrate tolerance. It is common to have a blood sugar reading of 180 to 190 in a patient whose urine is sugar free.

In treating coma, 600 c.c. of a 5% glucose solution with 30 units of insulin are given every 2 to 3 hours by hypodermoclysis, with fluids and sodium bicarbonate by rectum. As soon as the patient is able to swallow, the orange juice and insulin regi-

men is begun; the rest of the treatment is along the lines put down for advanced acidosis. The insulin should be given before each meal. Insulin shock is dangerous. Gangrene is of 2 general types. (1) Isolated ulcerated type, which is very painful, and (2) general cellulitis type. Both types are better treated along diabetic lines. Amputations practically always are followed by death. If not operated upon these gangrenes slough off and then get well.

Drs. Fineberg, Ginsberg, Jaffin, Nallit, Berlin, Heilbrun, Seigler, Waters and Pyle took part in the discussion, during which the following points were brought up: The apparent increase in diabetes is due to the increased span of life; more frequent diagnoses; insurance examinations and publicity. Deaths as a rule are due to intercurrent affections rather than to the diabetes per se. In operating on diabetics, treat them both pre and postoperative as if they were advanced acidosis cases. In gangrene, x-ray shows up calcified arteries. Joslin reports but 2 deaths in 555 cases of diabetic coma and acidosis treated.

#### MERCER COUNTY.

A. Dunbar Hutchinson, M.D., Reporter.

The Mercer County Medical Society met in the Carteret Club, October 13, at 8:30 p. m., Dr. John B. Sill, the Vice-President, presiding. The minutes of the preceding meeting were read and approved.

Dr. Halloway, of the University of Pennsylvania, gave a most instructive talk on the subject, "The Use of the Ophthalmoscope by the General Practitioner". With the aid of new slides, Dr. Halloway illustrated many of the more common conditions affecting the eye-ground, and explained in a very interesting manner the salient points of differentiation. The subject was thoroughly discussed by a large and appreciative audience.

Drs. C. G. Guthrie, J. F. Pessel, of Lawrenceville, and Henry M. Rowan, of Trenton, presented applications for membership. Dr. William D. Olmstead applied for transfer to Atlantic County, and Dr. John Bruyere, on account of being away from the city for an indefinite period, presented his resignation. The society accepted both of these resignations, and went on record as regretting the loss to the community and the society.

Dr. Frank W. Pinneo was given the floor, and urged the promotion of Group Insurance; a very spirited discussion followed, during which time a luncheon was served, and Dr. Pinneo impressed the members by his thorough knowledge of the subject.

The usual committee was appointed with power to act in the arrangement for the annual banquet.

#### MONMOUTH COUNTY.

D. F. Featherston, M. D., Reporter.

The Monmouth County Medical Society resumed its regular monthly meetings, October 27, 1926, at the Metropolitan Hotel in Asbury Park. With about 25 members present, the meeting was called to order by the president, Dr. H. S. Brown, of Freehold, who introduced as speaker of the evening, Dr. M. W. Reddan, of Trenton, to present a paper on "Diverticulosis". The paper was well received and brought forth considerable favorable comment.

Dr. G. Van Warner, of Red Bank, reported for the Welfare Committee and read the report of Dr. H. O. Reik, of the State Committee, presented at a recent meeting of that body. Several

topics taken up in the state report caused comment in the local society. The society appointed a committee to inquire about the film available for showing the manner of conducting a periodic health examination, and state body will also be asked to supply the names and subjects of the speakers available for talks to lay bodies on public health topics.

Mrs. W. G. Herrman, of Asbury Park, was appointed to have charge of the organization of a ladies' auxiliary to the local county society, after the members went on record as being in favor of the formation of such an auxiliary.

### MORRIS COUNTY.

Marcus A. Curry, M.D., Reporter.

#### Occupational Therapy Exhibit at State Hospital, Greystone Park.

An exhibit of products with demonstrations of the work of the Occupational Therapy Department of The New Jersey State Hospital at Greystone Park was held on the grounds of the institution on Saturday, October 9, 1926, and combined with the exhibits was the annual field day for patients.

The exhibit was more extensive than previously shown and indicated to some extent the vast expansion that constantly is going on in this therapeutic, economic humanitarian work in which the patients have opportunity and are encouraged to engage as prescribed by the medical staff.

The basic principle of the inviting opportunities for therapeutic employment is to stimulate the patients to cooperate in their betterment, both physically and mentally, as distinguished from a purely commercial enterprise; but there is no gainsaying that it is economic in the great variety and immense quantity of articles produced for hospital use and for sale to the public, and that it is humanitarian in that it gives an outlet for an interest kindled as against enforced idleness.

In the Occupational Therapy Department there are branches of Arts and Crafts both for men and women in which all kinds of fancy and plain articles are made; such as reed and willow furniture, baskets of all descriptions, brooms, brushes, rag carpets weaved and artistic rugs made, and all sorts of fancy articles for personal and household use; in the plain sewing branch are made for hospital use such articles as table cloths, pillow cases, sheets, towels, underwear, laundry bags and aprons. There also is a modern printing and bookbinding division which beside getting out monthly The Psychogram does the immense amount of printing and ruling of the various forms used at the institution, including pads, books, visitors' registers, etc., and where books for the patients' library are repaired and rebound.

There also is a Concrete Block making plant where are manufactured the blocks used in hospital buildings and betterments. The patients also engage in the cultivation of flowers and the upkeep of the grounds and are responsible for much of the work done on the farm and in the gardens; these forms of occupation being prescribed for those who will derive the most benefit from outdoor exertions.

The scenic effect of the exhibit was superb. The entrance was beckoning with 2 massive pillars of concrete block made by patients and the passageway led the visitors and guests over a greensward flanked on either side by very natural looking though improvised green hedges, through

a gracefully winding walk that ushered into striking full view the various exhibits in attractive array.

Physical education had its part in the program and demonstrated the work carried on by giving drills, folk dances and playing games.

There was a large attendance of medical heads of various state and county institutions, other state and county officials and the general public.

An address of welcome was made by Superintendent Marcus A. Curry of the State Hospital at Greystone Park, who in turn introduced Commissioner William J. Ellis of the State Department of Institutions and Agencies and Secretary to the Governor, Fred L. Bloodgood, all of whom made brief addresses in laudation of the work being carried on at the institution.

### PASSAIC COUNTY.

Donald B. Low, M.D., Secretary.

The regular monthly meeting of the Passaic County Medical Society was held at the Health Center Building, in Paterson, October 14, 1926, at 9:15 p. m., Dr. Charles R. Mitchell presiding. There were 45 members and 3 guests present.

An amendment to the by-laws was voted on and passed. Chapter I, Section 1, by-laws. The unanimous approval of the Board of Censors shall constitute election, but such election shall not take place until every member has been notified of such application in accordance with Chapter II, Section 5 of by-laws. Chapter II, Section 7. Its unanimous approval in writing shall constitute election.

November being the month in which our annual meeting is held and officers for the coming year are elected, a Nominating Committee was appointed by the President, as follows: J. A. Maclay, H. Cogan and Norman Dingman.

Dr. Pinneo spoke on the question of Group Insurance.

Dr. Louis Shapiro read a report from the Committee on Periodic Health Examination. The report made by the Kings' County Medical Society, N. Y., appealed very highly to our committee and a copy of this report was to be sent to each member of our society.

The Scientific Program was given by Dr. Frederick C. Holden, of New York City, who presented a very interesting subject, namely: "Pathologic Conditions of the Cervix and Their Treatment". He spoke of the variety and positions of the cervix, including the elongated infantile cystic and eroded, or as he termed the latter pseudo-adenomatous cervixes. The cancer age he said must be eliminated because carcinoma of the cervix can occur at almost any age. He stated that most men have disregarded operation upon carcinoma of the cervix and are now treating this condition by means of radium and x-ray therapy; this, of course, must be done by experts.

He also gave an extended talk on the use of the cautery in the treatment of endocervicitis. He condemns the use of the Post cautery in that it is too bulky for such delicate work. Dr. Holden highly approves of cauterization with a very fine tip cautery and the lines of cauterization must be made very slowly and not too deep nor more than 1/32 in. in depth. The cauterization should be done 2 or 3 times at 2-month intervals.

Drs. T. A. Dingman, Wm. Spickers, Jacob Roemer and Leon E. DeYoe took part in discussion of this paper.

The application of Dr. Hans Wassing, for membership, was referred to the Board of Censors.

The meeting adjourned at 11:30 p. m.



**SALEM COUNTY.**

William H. James, M.D., Reporter.

The annual meeting of the Salem County Medical Society was held at the Memorial Hospital, Salem, New Jersey, October 13, at 2 p. m.

The reports from the Delegates to the State Society were read, as well as those from the neighboring counties.

At the conclusion of the regular business the society had the pleasure of hearing a lecture from Dr. Gilbert J. Palen, Professor of Otolaryngology at Hahnemann Medical College, Philadelphia, who chose for his subject "Diseases of the Ear". He spoke more fully about the diseases that the general practitioner would come in contact with than those that the specialist would meet. The paper was discussed quite fully by the members present, after which a rising vote of thanks was given Dr. Palen.

This being the annual meeting the following officers were elected: President, David W. Green; Vice-President, William T. Hilliard; Secretary, George A. Davies; Treasurer, John F. Smith; Reporter, William H. James. Censors: Drs. J. M. Summerill, D. W. Green and W. H. James. Annual Delegate to the State Medical Society, J. M. Summerill; Alternate, William H. James; Member of Nominating Committee, David W. Green. Delegates to Gloucester County, Drs. G. A. Davies, J. M. Summerill and W. H. James; Delegates to Camden County, F. H. Church, C. L. Fleming, and E. G. Hummel; Delegates to Cumberland County, R. M. A. Davis, D. W. Green and E. G. Hummel.

The Delegates present from Gloucester County were Dr. Elwood E. Downs, of Swedesboro, and Dr. Samuel F. Ashcraft, of Mullica Hill.

At the conclusion of this meeting the members of the Society enjoyed a duck supper at the new hotel. The next meeting will be held at the Memorial Hospital the second Wednesday in December.

**SUSSEX COUNTY.**

H. D. Van Gaasbeek, M.D., Reporter.

The twenty-eighth annual joint meeting of the medical societies of Sussex, Warren and Morris Counties was held in the Log Cabin room of the Cochran House, Newton, New Jersey, on October 19, 1926. Dr. F. H. Morrison, presided over the meeting, which was attended by 36 members.

Dr. F. M. Allen, Director of the Physiatrie Institute, at Morristown, addressed the society on "Some Things of Interest to the General Practitioner", confining his remarks more particularly to the treatment of cardiac, renal and vascular diseases, as observed in every day practice. He stressed especially the importance of dietary treatment, saying that, in fact, without proper diet drugs were of little use. He paid particular attention to the importance and suitable use of the salt free diet; it often being possible to so control the edema and shortness of breath as to add materially to the patient's life expectancy.

In diabetes, he very highly extolled the use of insulin when used under proper conditions and its effect carefully observed in connection with a proper dietary regimen.

Dr. Coleman, of Hamburg, exhibited a case of "Hermaphroditism" in an infant 2 months of age, which brought out an interesting discussion.

The meeting then adjourned for dinner, furnished by "Mine Host" Hendershot; a dinner, which was excellent in every particular and enjoyed by all.

After dinner, the meeting reconvened and Dr. Morrison presented a paper on "Scarlet Fever", describing a case of delayed eruption; until the sixth day.

Following upon adjournment of the Tri-County Society meeting, the Sussex County Society held its ninety-seventh annual meeting. The usual order of routine business was disposed of and the following officers were elected for the ensuing year:

President, Frederick Morrison, Newton; Vice-President, Lamar Voorhees, Newton; Treasurer, T. R. Pooley, Jr., Newton; Reporter, H. D. Van Gaasbeek, Sussex; Secretary, F. P. Wilbur, Franklin. The newly elected members were: Robert R. White, Franklin; Arthur Greenfield, Newton.

**UNION COUNTY.**

Russell A. Shirrefs, M.D., Reporter.

The annual meeting of the Union County Medical Society was held at the Suburban Club, Union, New Jersey, on the evening of October 13, and was largely attended. Dr. J. B. Morrison, Secretary of the State Society, was an honored guest. After the meeting was called to order by President George S. Laird, an election of officers for the ensuing year resulted in the following selections: President, George L. Orton, Rahway; Vice-President, Frederick W. Sell, Rahway; Secretary, George W. H. Horre, Elizabeth; Treasurer, Alden R. Hoover, Elizabeth; Reporter, Russell A. Shirrefs, Elizabeth; Censor 3 years, E. W. Hedges, Plainfield. Permanent Delegates: George Banker, Elizabeth; M. A. Shangle, Elizabeth; George Strickland, Roselle; George Laird, Westfield; B. V. Hedges, Plainfield; John Runnells, Scotch Plains, D. R. McElhinney, Elizabeth. Annual Delegates: Frank A. Williams, Elizabeth; Emil Stein, Elizabeth; C. A. Brokaw, Elizabeth; George Seymour, Elizabeth; Roland Blythe, Cranford; Watson B. Morris, Springfield; Alfred F. Van Horn, Plainfield. Alternate Delegates: Harry Block, Elizabeth; Michael Vinciguerra, Elizabeth; Thomas Higgins, Elizabeth; A. Casilli, Elizabeth; Irving Lerman, Elizabeth. Member State Nominating Committee; George Banker, Elizabeth.

Drs. Alice Stevens Gibbs and William Yuckman, of Elizabeth, were elected to membership; as were Ferdinand De Caesare and A. Casilli, formerly of Essex County. Five proposals for membership were received for action at the next meeting.

Dr. Arthur Stern, of the Union County Milk Commission, told of the recent activities of that body. Dr. C. H. Schlichter urged prompt action by those who had not enrolled for the proposed Group Insurance, and introduced Mr. Denner, the agent, who clearly explained a number of features which had not been clear to some. Dr. J. B. Morrison addressed us, speaking among other things of the advantages of a Woman's Auxiliary, which had proved of much real benefit in other states.

The scientific program was devoted to a symposium on "Cancer". Dr. Casilli spoke of its pathology; Dr. B. Hedges, cancer of the breast; Dr. M. A. Shangle, cancer of the stomach and intestines; Dr. N. L. Wilson, cancer from the specialist's point of view; Dr. S. T. Quinn, on the use of radium in malignancy; Dr. H. A. Vogel, x-ray in cancer; and Dr. I. Lerman on cancer of the genito-urinary tract. Many interesting points were brought out, and a general discussion followed.

During the afternoon the privilege of the golf course was extended to the society, and a goodly number availed themselves thereof.

A substantial dinner was served at 6.30 p. m.

### WARREN COUNTY.

F. A. Shimer, M.D., Reporter.

The annual meeting of the Warren County Medical Society was held at Belvidere, New Jersey, October 12, 1926, at 11 a. m.

The meeting was called to order by the President, Dr. L. H. Bloom. The minutes of the previous meeting were read and accepted.

The Treasurer's accounts were audited and found correct.

One application for membership was received and referred to the censors for action.

The following officers were elected: President, R. B. Stone; Vice-President, G. Homer Bloom; Secretary, L. C. Osmun; Treasurer, G. W. Cummins; Reporter, F. A. Shimer; Annual Delegate, L. H. Bloom; Alternate Delegate, A. C. Zuck; Censor 3 years, H. B. Bossard.

A resolution to amend the Constitution and By-Laws with reference to annual dues was accepted and laid over for action at the next meeting.

The meeting was well attended.

Dr. Frederick W. Roberts read a very interesting paper on "Hypertension", which was freely discussed by nearly all the members present.

The question of Group Life and Health Insurance was discussed but no action taken.

After the meeting the members and guests enjoyed a duck dinner served by the management of the Hotel Belvidere.

### SPECIAL REPORT.

#### American Climatological Association.

The forty-third annual meeting of the American Climatological and Clinical Association was held in Philadelphia, September 27, 28 and 29, 1926. Dr. David R. Lyman, of Wallingford, Connecticut, was the president, and had secured an unusually good series of papers for the sessions of the society. More than the usual number of members attended, there being nearly 100 present at some time during the 2 days' meetings. Eighteen papers were read and discussed, covering a wide range of clinical studies.

Professor Edward Rist, of Paris, led the discussion of Dr. James A. Miller's paper on "Bronchograms in Chest Diagnosis".

Sir Henry Gauvain, Superintendent of Lord Mayor Theolar Cripples' Hospital and College, Elton, England, read a paper, illustrated with many slides, descriptive of the "Value of Light Treatment in Surgical Tuberculosis" as conducted at Alton and Hayling Island.

Both these gentlemen were elected honorary members of the Association.

On Monday the society enjoyed the hospitality of its Philadelphia members at luncheon at the Union League Club, and on Tuesday Dr. Hatfield entertained the society at his home as guests of the Philadelphia Health Council and Tuberculosis Committee. The afternoon session was held at the Chestnut Hill Home for Consumptives, and the members had an opportunity to see the work being done in heliotherapy at that institution. On Tuesday evening the Annual Banquet was held at the Wissahickon Farms Club House, an occasion of especial interest to all members.

On Wednesday morning a number of the members were guests of the H. K. Mulford Company,

enjoying the privilege of being conducted through the various departments and having demonstrated the making of insulin, and various vaccines, and listening to lectures on the recent discoveries about snake venoms and pneumonia vaccines.

Dr. Walter A. Baetjer, of Baltimore, was elected president for the ensuing year.

W. G. Schauffler, M.D.

### THE BEATING HEART.

Ralph S. Cone, M. D.

Somewhere a heart is beating  
Whose throbs shall ever be  
Beneath the stars mine meeting  
In silent ecstasy.

Some day my heart shall find it  
I know not how nor where,  
But I know my own shall bind it  
With cords of jealous care.

As the restless ocean surges  
Upon the lonely shore,  
And the night wind sings sad dirges  
That sound forever more.

So, as they dash and smother  
Lone hearts must ever beat,  
Each unknown to the other  
Until they chance to meet.

Then shall the clouds be rifted  
By a dawn that shall not die,  
And night's dark shades be lifted  
As day steals o'er the sky.

Then shall the sea cease pounding  
Upon its shingly bars,  
And in gentle cadence sounding,  
Shall soothe to sleep the stars.

With sweet Aeolus sobbing  
A melody divine,  
When the heart that for me is throbbing  
Shall make its music mine.

### HOSPITAL WALLS.

By Gloria Goddard.

White?  
Look close—  
Their smooth flat surfaces,  
Like the sensitive wax of recording disks,  
Bear immortal history.  
The unseen script of living  
Is traced upon these walls.  
Invisible legends of life and death,  
Etched indelibly.  
The pale thin wail of the newborn babe  
Sketched lightly—in that corner, there;  
Yonder, in fading lines,  
The sigh of a last farewell;  
Close beside, almost splitting the plaster,  
An agonized scream of pain;  
A pæan of joy for a dear life saved,  
Drawn with flourish of hope on the ceiling;  
And in between, and all around,  
Faint sighs scrawl,  
Deep moans smudge,  
Hot tears blur,  
Sad hopes falter,  
Like a hand unschooled to write.  
White walls?  
Look close—.

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## ROENTGENOLOGIC DIAGNOSIS OF GALL-BLADDER DISEASE.

JACOB ROEMER, M.D.,  
Paterson, N. J.

After Carl Beck announced, in 1900, the roentgenologic visualization of gall-stones,

studies were commenced in that field. Not however, until the perfection of the modern technic consisting of the interrupterless transformer, duplitized films, the double intensifying screen and the Bucky-diaphragm, could gall-stones be demonstrated radiographically with any degree of success.

The clearness with which a biliary cal-



Figure 1.—Gall-bladder containing numerous stones. Note the low position of the gall-bladder.

culus can be visualized on a roentgenogram depends upon the amount of calcium salt it contains. Pure cholesterin stones do not cast a shadow, as their opacity to the Roentgen-ray is no greater than that of the surrounding tissues. There is a diversity of opinion among roentgenologists as to the percentage of gall-stone cases that can be roentgenologically diagnosed. Some claim

Mayo Clinic, state: "Among 226 cases of gall-stones found at operation the Roentgen-ray revealed stones in 87 (38.4%). The gall-bladder itself quite frequently casts a definite shadow and some authorities claim that to be evidence of pathology. This however, is open to dispute.

The secondary manifestations of gall-bladder disease are discerned in the course



Figure 2.—Both, gall-bladder and gall-stones are distinctly visualized.

success in only 5%, while others claim 90% and over. If we were to interpret as stones only definite and characteristic shadows without reliance upon our imagination, then 35% would probably be a correct estimate. To arrive at an accurate percentage we must rely solely on cases proved by operation. Carmen, MacCarty and Camp, of the

of an examination of the gastro-intestinal tract by means of a contrast meal. An enlarged gall-bladder or one thickened by chronic inflammation produces quite characteristic pressure deformities on the first portion of the duodenum, and occasionally on the antral portion of the stomach. Often the first portion of the duodenum is drawn



over to the gall-bladder by adhesions. Such adhesions may produce deformities in the first portion of the duodenum similar to that produced by a duodenal ulcer. The hepatic flexure of the colon may also be deformed and fixed by adhesions from the gall-bladder. Other secondary manifestations of gall-bladder disease are reflex phenomena produced in the stomach, such as hyperperistalsis, delayed gastric motility,

as sodium-tetrabromphenolphthalein and sodium-tetraiodophenolphthalein when injected intravenously caused to be produced a definite Roentgen-ray shadow of the gall-bladder. These dyes are principally taken up by the portal circulation and excreted in the bile. A similar test applied to man was productive of the same results. When using the intravenous method the gall-bladder is normally visualized from 2 to 3 hours



Figure 3.—Characteristic ring-like shadow of a large cholesterol stone, whose top layer is composed of calcium salts.

pylorospasm, and spastic incisura. Such spastic Roentgen signs are not pathognomonic of gall-bladder disease; other intra-abdominal lesions may produce them.

A very important contribution to the Roentgen diagnosis of gall-bladder disease was brought out by Graham and Cole of St. Louis; preliminary report of their discovery being published in the *J. A. M. A.*, Feb. 23, 1924. These authors found, in experimenting on dogs, that certain dyes, such

after the injection, and becomes more pronounced after a lapse of 24 hours, gradually becoming fainter and entirely disappearing after 32 hours. When there is an impairment of the liver function or an obstruction of the cystic duct, then the shadow of the gall-bladder is very faint or entirely absent.

Graham and Cole arrived at these conclusions after a careful study of 55 cases of clinically suspected gall-bladder disease. The publication of their results was ac-

claimed with great enthusiasm by roentgenologists throughout the world, and the test proved to possess the merits claimed for it by its discoverers. This procedure, however, is not without danger, as some of the patients subjected to the test had very severe reactions. At best, the test is a hospital procedure. A desire to obviate these untoward effects and to simplify the test in order to make it suitable for office practice, led to experiments in the oral administration of the dye.

ach, as the hydrochloric acid of the gastric juice causes precipitation of the dye. Most commonly used are pills or capsules coated with salol, keratin, steric acid, or hardened in formalin. These vehicles are dissolved in the small intestine, thus liberating the dye.

The procedure is as follows: the day before examination, the patient is instructed not to take any cathartics. He is to take a light supper and in 15 minutes afterward  $\frac{1}{2}$  dr. of bicarbonate of soda; 15 minutes



Figure 48.—A calcified gal.-bladder containing pus and many stones.

In January, 1925, Whitaker, Milliken and Vogt announced their results in the oral administration of the dye. About the same time Mennees and Robinson, and others, reported splendid results in the oral administration of the sodium-tetraiodophenolphthalein. When thus given, the dye has to be put up in pills or capsules, in a vehicle which would not be dissolved in the stom-

ach, after this the patient is given the dye, which is usually divided into 4 doses 15 minutes apart. The patient should drink liberal quantities of water and lie on the right side while taking the dye, and remain in that position for about 1 hour after the last dose is taken. The following morning he is to report for an examination, on an empty stomach, at which time several films are



taken of the gall-bladder region. After this, the patient is to take a meal containing a liberal quantity of fats and report for another examination about 2 hours later. The last examination is made 24 hours after the first. Some men advise a barium meal examination of the gastro-intestinal tract to begin after the first set of films are made. This way, a study of the secondary manifestations of gall-bladder disease can be made out at the same time.

36 hours after the dye administration. In a normal gall-bladder, the shadow should be oval or pyriform in shape, homogeneous and should at later hours become smaller, indicating a normal contractibility of the viscus. Failure to produce a gall-bladder shadow, delayed or scanty filling of the gall-bladder, abnormal position, enlargement, irregular contour, mottling and the absence of contractibility are evidences of pathology. If stones are present in the



Figure 5.—Gall-bladder pressing against the bulbous duodeni producing a deformity in the latter.

Einhorn and Stewart administered the dye into the jejunum through a duodenal tube and obtained good results. Such procedure is not simple and is objectionable to the patient.

Now as to the findings and interpretation: A normal gall-bladder casts a shadow 12 to 14 hours after the oral administration of the dye, becomes smaller after a fatty meal has been eaten, and is entirely effaced

gall-bladder, they may cast positive or negative shadows.

I have examined in my office 60 cases by the oral method. At the Barnert Hospital, my assistant, Dr. Salzman, and I examined 26 cases. Of the 86 cases examined: 1 patient vomited the capsules when she took the last dose; 3 patients vomited about 1 hour after the last dose was taken; 6 patients had diarrhea a few hours after the

capsules were taken and 5 complained of slight headache. In 11 cases most of the capsules passed into the colon intact but a sufficient amount of the dye entered the gall-bladder to cast a shadow. The gall-bladder was definitely visualized in 72 instances. In 14 the gall-bladder failed to fill, and in the case of the patient who vomited immediately after the last

failed to enter the gall-bladder the operative findings disclosed obstruction of the cystic duct by biliary calculi in 2, and the other 4 showed various degrees of cholecystitis with obstruction of the cystic duct. Of the 11 cases that showed negative shadows in the gall-bladder, 8 came to operation, and all proved to be gall-stones. In 2 of the cases where the gall-bladder shadow



Figure 6.—Bulbus duodeni drawn over to the gall-bladder and held firmly in that position by adhesions.

dose there was only a very faint shadow of the gall-bladder. In 11 of the cases where a preliminary examination before the dye was taken was negative, there was evidence of gall-stones with the dye test. Of the 49 cases that gave a positive reaction to the Graham test, 18 were operated upon. In 6 of the cases where the dye

was distorted and the dye was retained for over 36 hours, the surgeon found cholecystitis with extensive adhesions: 2 cases where the gall-bladder shadow was very large and faint, proved to be hydrops. In 1 of my cases that was examined during an attack of apparent biliary colic, the dye failed to enter the gall-bladder. The same



patient was reexamined when he was symptom free and at that examination the dye entered the gall-bladder and gave a negative Graham reaction. Four of the cases where the Graham test was negative, came to operation and in each the gall-bladder was normal. Of the 49 cases that gave a positive response to the Graham test, 35 had a routine barium meal examination of the gastro-intestinal tract, and 31 of these showed secondary manifestations of gall-bladder disease.

From a paper published in the J. A. M. A., September 26, 1925, by Graham and his co-workers I quote the following: "We have performed cholecystography in a total of 467 hospital and ambulatory patients. A correct diagnosis has been made in 95% of the cases confirmed by operation."

#### CONCLUSIONS.

Gall-stones can be roentgenologically visualized provided they contain some calcium salts. The secondary manifestations of gall-

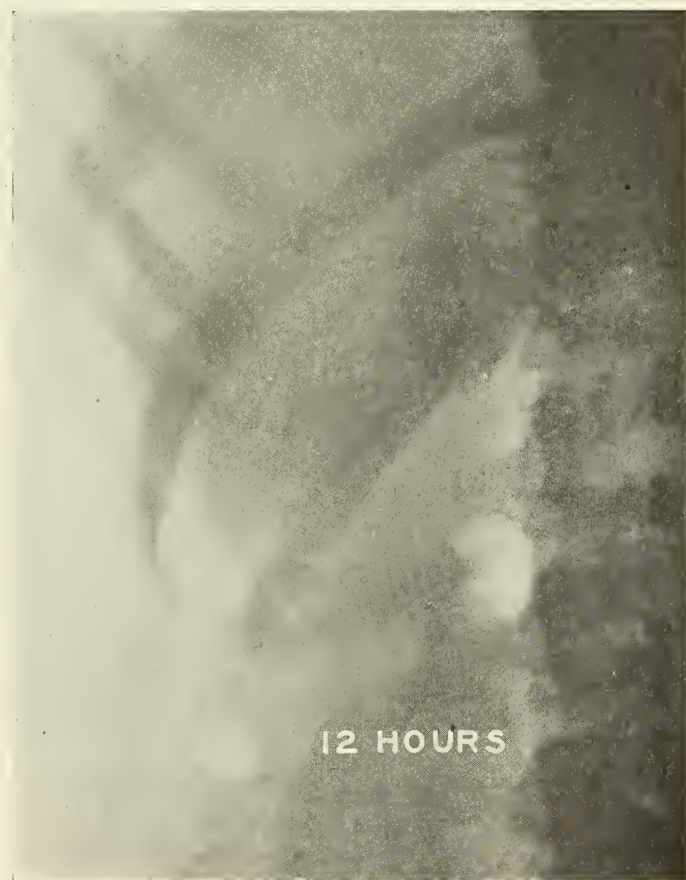


Figure 7.—Normal gall-bladder 12 hours after the oral administration of sodium tetraiodophenolphthalein.

At the Twenty-fifth Annual Meeting of the American Roentgen Ray Society, held at Swampscott, Mass., September 3-6, 1924, Carmen stated that 178 cases had been examined at the Mayo Clinic by the Graham method. Of these, 39 were operated upon and all of them had cholecystic disease; in 34 of the cases the Graham test was positive.

bladder disease disclosed during a barium meal examination are strong presumptive evidence, but not pathognomonic of gall-bladder pathology.

The Graham test has proved to possess definite diagnostic value and deserves a prominent place in the study of the physiology and pathology of the gall-bladder. The oral administration of the dye is very

simple, devoid of any danger, and yields excellent results. There is, however, room for further investigation regarding interpretation of the gall-bladder shadow and in preparation of the dye, so as to eliminate its toxic effects and also to make it more soluble in the small intestine.

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Figure 8.—Normal gall-bladder 16 hours after the oral administration of sodium tetraiodophenolphthalein.

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a positive gall-bladder diagnosis with the x-rays in about 30% of cases, this test of Graham, Cole and Copher enables us to make a positive diagnosis in 90%.

After these men had come out with their test, everybody wondered, why he couldn't have found out that test sooner. Everybody knew, that phenolphthalein is excreted in the bile. But it took a genius to make the next step, and decide that, if an iodine or bromine nucleus could be brought into the phenolphthalein, that this could be used as a means to cast a shadow of the gall-bladder on the x-ray film.

This method is still a very young one. We do



Figure 9.—Pathologic gall-bladder 12 hours after the oral administration of sodium tetraiodophenolphthalein.

#### DISCUSSION.

**Dr. Ernest A. May, Newark:** It was a great pleasure to me to hear Dr. Roemer talk in such an excellent way on this new method of cholecystography and I am very sure that we all feel this way. From the beginning the American roentgenologists have been far ahead of all others in the x-ray diagnosis of gall-bladder diseases. No wonder that an American again takes up the leadership and presents the world with such an ingenious invention, which is just as important as was the idea to render the gastro-intestinal tract visible by giving the patient a barium meal. While heretofore we could only make not know yet all the possibilities, how far it will

bring us in the diagnosis of the diseases of the liver and the gall-bladder. But we know already that it is far more accurate than any one of the functional tests now in use. With it, we are able to detect a cholecystitis in its very beginning, at a time when only the microscope could find the inflammation. Heretofore, most cases could be accurately diagnosed only after they had gone through the stage of advanced pathology with scarring, formation of stones, etc. As this method gives us the possibility of an accurate early diagnosis, it may create another chapter in preventive medicine. By early operative treatment most of the ravages of long standing cholecystitis with its accompanying serious effects on liver

and pancreas can be prevented. I think, we all should be thankful to Dr. Roemer, that he has brought this subject to our attention in such a precise manner, for I believe this method will be of great help to all of us. There is one more point I would like to bring out: No matter how valuable this new test may become to us, the former methods of x-ray examination of the gall-bladder still remain of great importance. There are cases in which we need no contrast filling at all, cases of calcified gall-stones and lime deposits in the wall of the gall-bladder. There are other cases in which we can make a probable diagnosis by examining the gastro-intestinal tract and studying its relation to the gall-bladder. I should say that an examination of the gall-blad-

Before the days of the railroad, we were all satisfied to travel by covered wagon and stage-coach, and if you will read the intimate history of this country along in 1800, you will find that the various stagecoach companies used to boast of their ability to keep to the schedule and to make certain distances between certain points within a "relatively short space of time", generally ending up with the promise "God willing". As a roentgenologist, that is the way I felt, more or less, before this test came out, about the diagnosis of gall-bladder conditions. We all know that such very definite stones as the doctor has shown here of calcium bilirubin or mixed cholesterin and calcium bilirubin can be shown



Figure 10. Pathologic gall-bladder with a negative shadow in the center cast by a cholesterin stone. 12 hours after the administration of sodium tetra-iodophenolphthalein.

der is not to be considered complete as long as the patient has not had a barium meal in order to study the influence of the possibly diseased gall-bladder on the gastro-intestinal tract. This, together with the new Graham test will give us the greatest satisfaction.

**Dr. Wm. G. Hermann (Asbury Park):** Allow me, first, to extend my congratulations and thanks to the writer of this paper for his presentation of the subject. This is a subject which is, of course, of a great deal of importance and interest to roentgenologists, but I think it is also of interest to clinicians.

directly, but the indefinite and light stones have given all of us disappointments.

Certain men, like George and Leonard in Boston, have reported a very high percentage of positives, and, without any disrespect to them, I think we may congratulate them on their guessing ability. I don't want to misquote, but believe I am right when I say that the X-Ray Department at the Mayo Clinic has a percentage of something like 95% correct at the operating table for their positive cases, but with a negative percentage of something like 17, therefore making a combined percentage of somewhere around 56 for direct x-ray examination of the gall-blad-



der without using the dye. At the Mayo Clinic, they are not allowed to say, "Perhaps", or "Doubtful", or "Suspicious", or "I think it is or it is not".

When this test came out, it was of interest, of course, to roentgenologists, first, as offering something very definite and something that they could visualize, but the more we work with it, and the more the research men and clinicians work with it, the more information with regard to physiology of liver and gall-bladder comes out; some things are being brought out that we usually do not connect with gall-bladder examinations.

As both Dr. Roemer and Dr. May mentioned, this test depends upon the fact that the phthalic acids are excreted, as Abel and Rountree showed,

proven to be not a true diabetes but an intermittent glycosuria.

There is another thing we are finding out by means of this test. We have found that a fatty meal, which is now used as part of the test to show whether this gall-bladder is functioning or not, will stir that gall-bladder to empty itself better than will any drug. The nearest approach to it is magnesium sulphate. Sosmann and Whitaker tried a large number of drugs, many of them in common use, and they had little or no effect upon the gall-bladder; this included alcohol, olive oil, and many other drugs that we think may have an effect. The fatty meal gave a much quicker and more complete



Figure 11.—Pathologic gall-bladder with negative shadows cast by many cholesterol stones. 12 hours after the oral administration of sodium tetraiodophenolphthalein.

through the liver; therefore, the liver function as a filter must be working. When that liver function is disturbed by various forms of hepatitis, sclerosis, and so forth, we are going to have this test interfered with. Therefore, before we can say that this test, other than the visualization of stones, proves positive for gall-bladder pathology, we must know something about the liver clinically. Furthermore, we are finding that pancreatitis and diabetes interfere with this test. I had one very interesting case, in which the patient was supposed to be diabetic. While the test did not function as positively and prettily as in certain other cases, still it functioned definitely and normally, and subsequently that case was

emptying than anything except the magnesium sulphate.

Another thing that Dr. Graham has brought out is the fact that many cases of cholecystitis consist of an infection and lymphangitis in the wall of the gall-bladder; the mucosa may be comparatively intact. So that it is a better test for certain forms of cholecystitis than the Lyon's test.

Another thing that has been of great interest to me is the fact that just as the barium meal changed our conception of the position of hollow viscera, such as the stomach, within the body in normal postures and while the patient was conscious, so this dye test is changing our opinion as

to the location and habitus of the gall-bladder. One of the films that the doctor presented here showed some biliary concretions in the gall-bladder as low down as the crest of the ilium, and we are finding that many of these so-called thickened gall-bladders that we have been previously viewing on films are really the caudata or other lobes of the liver. In our "indirect" examinations for gall-bladder pathology by way of the barium meal, we have been giving much weight to deformities of the duodenal bulb and in many cases no doubt it is this same caudate lobe which has been causing the deformities seen, for in some of these cases where we have thought we saw the gall-bladder or pressure defects in the duodenum, the dye test has shown the gall-bladder to be in an entirely different location. I had one case in which the gall-bladder was definitely within the pelvis.

**Dr. Abraham E. Jaffin** (Jersey City): After hearing Dr. Roemer explain so clearly the value of this method in gall-bladder diagnosis, I should just like to issue a word of caution: that we don't get into the habit, when we suspect gall-bladder disease, whether we suspect it definitely or remotely, of simply having gall-bladder x-rays made. In that connection, I agree with Dr. May that the method should be only an additional factor in the examination, and that we should not handle a gall-bladder examination as we would a suspected renal stone, for instance. I think there is quite a difference between the 2 conditions because we have so many more gastro-intestinal symptoms from doubtful gall-bladder conditions; there are so many conditions which resemble gall-bladder pathology which may not be due to gall-bladder disease at all, that either the physician or the patient may be satisfied when there are negative or positive findings with the dye test, and in that way overlook ulcer or other maladies.

In any gastro-intestinal problem, nothing short of completeness, including the contrast meal, is fair either to the patient or the physician, and that I think is worth emphasizing here.

Then, with regard to the negative gall-bladders, I think it is perhaps well to define just what we mean by "negative". Did Dr. Roemer mean, in speaking of "negative", that the gall-bladder if it didn't show was pathologic and if it did show it was normal? I think there is room for confusion there. But, assuming the negative to be the one where the gall-bladder shadow is absent, we are apt sometimes to fall into error, in thinking that we have a diseased gall-bladder, unless we are very careful to note whether the patient has breathed, whether the dye has failed to be absorbed, or whether there has been some fault on the part of the patient in the method of taking the dye. All gall-bladders that don't show on the film should be repeated before a final diagnosis is made.

Then, in connection with those that do appear, I think we should be satisfied with nothing less than a very careful study, and by that I mean a repeated looking at the film. We study a film today, and we don't see perhaps what we will see if we look at it again tomorrow. So we should make a very careful study, looking for those little, calcareous, ill-defined areas, noting position, size, and shape; and another very important thing to note is delayed emptying time of the gall-bladder. I think, as in everything else, thoroughness in procedure on the part of the patient, and thoroughness in technic and reading on the part of the physician is most important and should never be overlooked.

**Dr. Roemer:** I am very much pleased with the discussion on my paper. Drs. May and Herrman made a fine analysis of the physiology and pathology of the biliary passages. Dr. Jaffin will find every question that he brought up discussed in the text of the paper. I do not believe that any diagnostic method in medicine is correct in 100% of cases, and neither is this.

A positive Graham reaction is shown by failure of the dye to enter the gall-bladder, scanty or delayed filling, delayed emptying of the gall-bladder, abnormal position, mottling, irregular contour, and absence of contractibility of the gall-bladder.

The gastro-intestinal examination by means of a contrast meal yields good results, that is, produces certain secondary manifestations in the stomach and duodenum which are of value in conjunction with clinical investigation, but by themselves these are not pathognomic of gall-bladder disease.

We must assume a normal liver function in order to get the dye to enter the gall-bladder. Failure of the dye to enter the gall-bladder may indicate liver disease or obstruction in the cystic duct. In several cases of carcinoma of the stomach with metastasis in the liver I have given this dye; in none of them did the dye enter the gall-bladder.

I fully agree with the question that Dr. Herrman brought up about the fatty meal being a better way of emptying the gall-bladder than the so-called Lyon's nonsurgical drainage of the gall-bladder (which is quite a difficult procedure and objectionable to the patient). If you give your patients bacon and eggs they will empty their gall-bladders much better than by the introduction of magnesium sulphate through a duodenal tube.

## RADIATION THERAPY OF TUBERCULOSIS.

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The history of radiation therapy, especially of heliotherapy in tuberculosis is as old as this disease itself. Herodot states that the ancient Egyptians and Assyrians used to expose their sick to the sunlight in sand pits and on terraces. Hippocrates is the first physician who wrote on heliotherapy. He considered pulmonary tuberculosis to be an ulcerative process. Also Plinius and different others advised heliotherapy. Galenus used to send his patients with tuberculosis and scrophulosis to Naples or to Egypt. The ancient Germans exposed their sick to the sunlight on top of the mountains. The Incas also knew of the healing properties of the sun for treatment of syphilis. Together with christianity spreading out



more and more over Europe, the science of medicine, which was closely connected with the worshipping of the former gods, descended rapidly and with it the accomplished facts about heliotherapy were forgotten.

It took medical science about 1000 years to find again that sun rays had a great healing power. In 1815 Loebel recommended the isolation of pulmonary tuberculosis. Bonnet, Olivier and Poncet used the sun's rays in arthritis. Bernhard and Rollier are the originators of modern heliotherapy. They had at their disposal ideal conditions in the highlands of the Alps, where there is an abundance of the ultraviolet rays. In lowlands, where the conditions are not quite as favorable in regard to intensity and duration of sunshine and the amount of chemically and biologically potent rays, artificial sunlight has to be resorted to. The eminent Danish physician, Finsen, discovered the therapeutic action of the ultraviolet rays and based his therapy on his experience with the carbon arc lamp. Another source of ultraviolet rays is the mercury vapor quartz lamp, (Bach) based on the fact that quartz is permeable to the ultraviolet rays, whereas glass is not. While natural and artificial sunlight are suitable for general treatment of the body, the Roentgen rays represent an excellent means for local action on the tuberculous process. This was first attempted on a larger scale by Iselin, whose results were confirmed by Wilms, Holfelder, Southard, Juengling and many others.

#### PHYSICS.

Sunlight and artificial light differ practically only in so far as the artificial light contains a larger percentage of actinic rays. Furthermore, treatment by sunlight can only be carried out in suitable locations and generally must be supplemented or substituted by artificial ray treatment, as the latter is not dependent on the weather conditions and is also more readily regulated as to dosage. If artificial light similar to sunlight is wanted, the carbon arc lamp answers the purpose; if a larger percentage of ultraviolet is desired, the quartz lamp is resorted to. Of the Roentgen rays only the

hard filtered ones are considered in therapy, i.e., 180-200 kilovolts and zinc or copper filtration. The x-ray machine used in diagnostic work is not powerful enough for the treatment of tuberculosis. Its use would be illogical as well as dangerous for the patient and has been abandoned by most medical men.

#### BIOLOGY.

The various types of rays used in the treatment of tuberculosis, although different in physical characteristics, are of identical value as biologic factors. They produce an irritation of the skin and directly and indirectly of the internal organs and diseased foci, whereby the active process of immunization and the natural healing powers are augmented. Although Rollier, Bernhard and Edgar Mayer claim that the short wave ultraviolet rays are the most potent ones in the solar spectrum, and Kisch regards the long wave heat rays as the main factor in therapeutic effect, it would seem that all rays are capable of producing a stimulation in the tissues and that perhaps a combination of these various rays is responsible for the beneficial effect upon the body.

In recent years our knowledge of tuberculosis has materially advanced by recognition of the fact that it is not a local disease; but the local manifestation of a general systemic disease, which in the first place requires general treatment. Furthermore, we are better informed about the pathologic processes involved in the development of tuberculosis in the various organs and are able to direct our therapeutic measures accordingly. There is no specific known which will render the tubercle bacillus harmless within the body. Radiation therapy is not credited, according to modern research, with any direct bactericidal influence on the tubercle bacillus in living tissues. We, therefore, resort to a combination of measures which indirectly lead to the desired end. Actinotherapy is not to displace other measures but must be regarded as an additional adjuvant of the body in its struggle against tuberculosis.

#### ROUTINE OF APPLICATION.

The exposures are applied generally and locally, both methods being of great importance as either alone will hardly ever bring about the desired result. The fact must never be lost sight of that the local disease is only a symptom of the general infection.

Modern actinotherapy, as it is also pursued by us in Sea View Hospital, New York City, is usually started with a general exposure of the body to the air, followed by a series of exposures to the sun. The air bath produces an irritation of the skin, increases metabolism and stimulates the heart and other vital organs. This preliminary air treatment is especially indicated for weak patients. The duration of exposure to the sun rays is very gradually increased according to the plan of Rollier, beginning with an exposure of the feet for 5 minutes, then extending the area daily to legs, thighs, abdomen, chest, back, etc. On the seventh day the general sun bath is increased by 15 minutes and then gradually to from 3 to 6 hours. If, on account of unfavorable climatic conditions, artificial light has to be resorted to, the body is exposed according to the plan of Brown and Sampson at a distance of 36 in. from the lamp, in accordance with Rollier's system. One might begin with an exposure of the chest and back for 2 minutes and gradually work up to 15-20 minutes. In order to increase the intensity of radiation the lamp may be gradually brought nearer to the patient. The skin of the patients assumes a brown discoloration more or less rapidly. Strong pigmentation is regarded as a favorable prognostic sign. This pigment formation enables the body to absorb more rays and transform them into energy.

Local treatment is administered with the water-cooled Kromeyer quartz or the Finzen carbon arc-lamp to superficial foci and with the Roentgen apparatus to superficial and deep lesions.

#### ACTION OF THE RAYS.

In local treatment with ultraviolet rays the hyperemia and reaction on irritation are supposed to start the healing process.

In general radiation the effect on the blood-vessels of the skin is credited with increasing metabolism, invigorating the body and increasing the bactericidal properties of the blood. In rachitis an increase of the abnormally low calcium salts was noted. Possibly a similar change is going on in tuberculosis.

The effect of x-rays may be explained as follows: The destruction of leukocytes, which are very sensitive to radiation, liberates substances having a favorable influence on tuberculous foci; in addition, the rays exert a stimulus upon the granulation tissues, thereby accelerating scar formation and healing. Based on this proven stimulation theory, the dosage of Roentgen rays must be very small. The severer the case, the smaller the dosage!

In early reports, a great deal of damage done to the skin by x-rays was mentioned, due no doubt to insufficient apparatus, inadequate filtering and high dosage. The large doses were used, perhaps, on the theory that the bacilli may be destroyed by Roentgen rays. We now know that the body has to fight its own battle against tuberculosis and small dosage is administered in order to stimulate the growth and more rapid cicatrization of granulation tissue. The conscientious physician will use for this purpose apparatus which will produce a homogeneous radiation by heavy filtration and high voltage. Modern authors condemn attempts to use a diagnostic machine, with light aluminum filtration, which produces rays that do not penetrate equally enough and which would require a much higher dosage than the skin and the underlying tissue can bear for any length of time, if the deeper tissues are to be affected. With a high voltage machine, diminution of the intensity of the rays is very gradual. Light and Roentgen therapy should only be entrusted to specially trained physicians, who are familiar with the clinical phenomena following radiation treatment and are better able to judge the time and amount of the next doses. It is dangerous to administer treatments at very short intervals and to use sun radiation on a part of the body which has been exposed recently to



x-rays, on account of cumulative effect. It is, therefore, advisable after Roentgen treatments to cover the parts with a dark cloth for 1-2 weeks, while taking sun baths. General constitutional disturbances, known as Roentgen sickness, occur only very rarely if the above methods are used.

#### FORMS OF TUBERCULOSIS TREATED.

*Lymphadenitis.*—The most frequent form of tuberculosis is that of the lymph nodes. Since Mutschenbacher wrote, in 1912, about its surgical treatment, describing it as a difficult and thankless job, the situation has changed completely, thanks to radiation therapy. In this country Williams and Pusey, and abroad Holzkecht, Bergeon and Wallobra, have done considerable work in this field. That the early results of Roentgen treatment were not as satisfactory, was due to incomplete equipment, the use of insufficient and soft rays and the failure to recognize the fact that even the mildest form of local tuberculosis is based on a general systemic disease. At present, we combine the local Roentgen treatment with a general ultraviolet radiation. The simple hyperplastic form of tuberculous lymphadenitis disappears very readily under such treatment. It would be considered out of date to attack a lymph node tuberculosis with the knife. If the nodes have broken down x-rays will accelerate the process and the pus is to be removed by careful aspiration, thereby preventing mixed infection, fistula and scar formation. If fistula and ulceration have already formed, then these are cleared up rapidly. The pus becomes thin and watery and cure is effected in a short time, leaving an almost invisible scar. The results are invariably good; Axel Reyn reports 95% cures in 500 cases; Runstroem almost 100% in 148 cases.

*Tuberculosis of the skin* reacts very well to treatment with the Kromeyer lamp and with x-rays. Sesquira cured 90% of his cases. Strauss and Jesioneck report similar results.

*Bones and joints.*—Considerable more difficulty than in the above cases is encountered in the treatment of tuberculosis of the bones and joints. Formerly, this was a surgical

problem. Now, actinotherapy proves to be an excellent adjuvant, so that in the dispute as to whether a surgical tuberculosis should be treated by operation or conservatively, the consensus of opinion seems to veer in the direction of conservative methods. Koenig, the advocate of surgical treatment, reports 68% permanent cures, against which Iselin reports 65% of 2650 cases remaining cured after 5 years. Lo Grasso cured 57% of his 1021 cases with heliotherapy only. Rollier's series is 2167 cases: Cured are 1746, or 80%; improved 242, or 11.2%; stationary 14, or 7%; worse, 32, or 2%. Southard reports 22 cases cured and 5 improved out of 27.

Operation is indicated only: (1) If patients are too old or do not respond to conservative treatment; (2) in severe mixed infection; (3) when the general condition becomes decidedly worse; (4) when a focus in the bone can easily be located and removed; (5) for social reasons.

Of course, each case has to be treated on its individual merit. Coexisting pulmonary tuberculosis, which is present in active or arrested form in about 60% of the cases, renders a cure considerably more difficult. A good general treatment is the main point and Roentgen treatment and surgical interference are merely local adjuvants. At all events attention must be paid to maintenance of the function of the affected joints, and for that reason orthopedic measures are of great importance. Rollier and Bier believe that a tuberculous joint should not be immobilized in plaster casts as this leads to ankylosis. Already, after the first Roentgen treatment, relief of pain is noticeable. The pus becomes thinner and more serous. Rapid gain in weight is observed unless there are serious complications of other organs. The dosage is arranged according to the principle of reaction to stimulation. Small doses are administered, with which it is impossible to do any harm. The general light treatment is carried out according to Rollier's scheme.

*Tuberculosis of the peritoneal cavity* offers the most fertile field for radiation therapy. Lawrason Brown, Edgar Mayer, Erickson, Stewart, Klewitz, Juengling and Stepp have

done highly creditable work in the treatment of this malady. As far back as 1898, Bircher treated tuberculosis of the peritoneum successfully with radiation. The dry adhesive form, wherewith surgery has not been particularly successful, belongs to the domain of radiation therapy and it seems also to be the method of choice in the exudative form. Klewitz made a study of all cases available in literature and draws the conclusion that it is questionable whether laparotomy in the ascitic form is superior to radiation therapy and that, therefore, the bloodless and safe radiation therapy should be preferred. In the event of failure, operation may still be resorted to and is not made more difficult on account of previous radiation. A very severe lung complication may be regarded as the one contraindication to actinotherapy in abdominal tuberculosis. It is wonderful the way some apparently hopeless cases are cleared up, provided the poor general condition is not caused by a severe lung involvement. Bircher, who has the largest experience in this field, recommends radiation therapy for the fibrinous type of cases and operation, followed by radiation, if there is much ascites or if the ascites does not disappear in a few weeks. The x-ray dose for local treatment is very small. The principal thing is to work with highly filtered rays, which permit homogeneous distribution of rays that enter the body through various portals of entry. Small doses do not interfere with the function of the ovaries and cannot do any harm to the skin.

Unless there are indications for operative interference, radiation therapy should always be given a trial. Kracker reports a case of large nonremovable tumor found on exploratory laparotomy which later disappeared completely under Roentgen treatments. Brown and Sampson, in their excellent book on "Intestinal Tuberculosis", write that heliotherapy and ultraviolet treatment often improve symptoms and bring about cures. They use the Roentgen rays only if heliotherapy has failed.

*Urogenital tuberculosis* is frequently favorably influenced by Roentgen treatment in

combination with general light treatment. The experience with x-rays in the treatment of tuberculosis of the kidneys is still very limited. It should be used, however: (1) In bilateral tuberculosis of the kidneys, when operation is out of the question; (2) in patients who have had a nephrectomy and develop disease of the other kidney; (3) in patients who refuse operation or where operation is not indicated (Stepp). Under reasonable dosage damage to the extremely sensitive adrenal glands is not to be feared. Disease of the bladder, if caused by a tuberculous kidney, generally subsides after removal of the offending kidney. However, in severe cases the danger of invasion of the other kidney exists. In such cases radiation is the only means, which offers any hope.

The treatment of tuberculosis of the testicle and the other male genital organs seems to be promising. Surgery records only poor results in epididymitis by removal of the epididymis or by castration. If the removal of one testicle is followed by disease of the other, actinotherapy should by all means be tried before complete castration. Freund cured 3 cases of localized tuberculous orchitis and epididymitis. In cases with pulmonary and nephritic complications he secured improvement, but no cure. Ullmann reports favorable results in 24 cases. Schmieden takes the stand that primary unilateral castration as an early operation in beginning epididymitis should be discarded, for the latter in his opinion is curable by conservative methods in a large percentage of cases. Only after combined climatic and physiotherapeutic course of treatment, preferably in a sanatorium, have failed to ameliorate the malady should operation be considered. Even then only the epididymis should be removed, thus leaving the testicle for its endocrine function. Castration should be done as a last resort. Bilateral castration should be avoided, as especially in such cases actinotherapy is of greatest importance.

*Tuberculosis of the lung.*—Unfortunately a complicating pulmonary infection renders the prognosis of all these cases decidedly more unfavorable. In fact, in most of these



cases the pulmonary tuberculosis is our main concern, as it is more sensitive to radiation therapy than any other form of tuberculosis. If it is the principle disease, the question arises as to which form we are dealing with from a pathologico-anatomic point of view.

The following are to be excluded from radiation therapy: Those showing a tendency to be progressive and exudative pneumonic cases. Only inactive and fibrous cases and cases showing a tendency to fibrosis should be given sun treatment. Formerly, open cases of pulmonary tuberculosis were excluded, but now the presence of bacilli in the sputum is not regarded as a contraindication in so far as clinical and x-ray observation show that there is fibrous tissue formation. Strong reactions must be guarded against, particularly in the third stage; for foci in the lungs may readily become active. The best results are obtained in the milder types of the disease. The air and sun treatment should be used as a preventative and as after-treatment in order to secure permanency of results. Excellent results are noted in the mild chronic forms of second stage tuberculosis, which complicate the bulk of the surgical cases treated by radiation therapy. The dosage of sun or artificial light baths is calculated according to the scheme of Backmeister. Radiation with artificial light is less dangerous for foci in the lungs than sun light because of weaker general effect and milder local effect. The indications, however, are the same as with heliotherapy.

While sun and artificial light tend to favorably influence the disease through a general reaction, Roentgen therapy attacks the tuberculosis focus itself. Long ago attempts were made to treat tuberculosis of the lungs by x-rays but failed on account of inadequacy of apparatus. Only after the introduction of deep ray therapy, with its elaborate technic, did Kuepferle and Backmeister succeed in obtaining favorable results. They use small doses of extremely hard filtered rays which stimulate the tuberculous granulation tissue to more rapid scar formation, provided the tissue has not been seriously damaged by the toxin of the

tubercle bacillus. Besides this local action it is more than likely that there is a general effect on the body. Slowly progressive cases, stationary forms and such, that show a tendency to become latent, are favorably influenced by x-ray treatments and healing is accelerated. Cases with weak or no granulation tissue, the exudative caseous forms, and all acute active cases should be avoided.

Roentgen therapy is not to be regarded as a cure for tuberculosis in these cases, but should be expected to support Nature's effort to heal. It should, therefore, be used only in conjunction with other measures. In all cases an attempt should be made to make the patient afebrile by general treatment, i.e., to bring about an arrest of the disease. After that x-ray treatment should be resorted to for enforcement of this natural healing process.

*Tuberculosis of the larynx.* — Radiation therapy is of equal importance as an adjuvant in the treatment of tuberculosis of the larynx, in which it assists in the scar formation of the lesions. X-ray therapy aids and expedites the healing of benign and productive types. Our aim is by general measures, silence treatment and operative measures to bring the ailment to a standstill and to change the exudative forms of tuberculosis into the productive forms; then radiation therapy is applied for the furtherance and the safeguarding of the cure.

#### CONCLUSION.

The above is a brief survey of the immense field occupied by radiation therapy in the treatment of tuberculosis. I wish to emphasize again that radiation therapy is not a panacea for tuberculosis. General and dietetic care will always remain the foundation upon which successful tuberculosis therapy must be built. Radiation therapy is one of the means which assist the body in its fight against tuberculosis. From small beginnings, this branch of science has opened up a great field for itself, not only in the treatment of tuberculosis, where however it is today one of the most curative agents.

## HOME TREATMENT OF TUBERCULOSIS BY ARTIFICIAL PNEUMOTHORAX.

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The subject of home treatment of tuberculosis has been much discussed and a great deal of literature has been accumulated on the subject, and this is also true of the treatment of pulmonary tuberculosis by artificial pneumothorax. In this paper, I am trying to show the advisability of the home treatment of pulmonary tuberculosis by artificial pneumothorax. In a personal communication with some of the leading tuberculosis specialists of the country, I found that 17.6% advocated home treatment, 70.6% advocated sanatorium treatment, and 11.8% advocated giving the first treatment in a sanatorium and the subsequent refills at home. The following are abstracts of opinions from some of these letters.

Dr. James Alexander Miller, New York, April 7, 1926: "I think home treatment, by which I mean starting a patient from the very outset in the home and keeping him there through the course of the disease, is either a failure or distinctly inferior to the training and education which is derived from a stay of at least a few months in a suitable sanatorium or health resort where other people are doing the same thing and consequently a patient learns the game. As far as artificial pneumothorax is concerned, I think in general it is unwise to start it anywhere except in an institution where during the first few weeks, at least, the progress of the case can be watched carefully and frequent fluoroscopic or radiographic examinations made. After a patient has had artificial pneumothorax for some time and is doing well, of course, treatment at home and having refills given in ambulatory fashion is a well accepted and perfectly satisfactory method."

The abstract of Dr. Miller's opinion sums up the ideas expressed by those opposed to this procedure.

Dr. Edward O. Otis, Boston, Mass., April 15, 1926: "Many cases of tuberculosis will not go to the sanatorium and in some of these artificial pneumothorax is indicated. Therefore they would lose this added chance of arrest unless the operation could be done at the home, and with an experienced operator I see no reason why it cannot be."

Dr. Martin F. Sloan, Baltimore, Md., May 19, 1926: "Ever since I have been giving this treatment, which dates back to April, 1911, I have set down as one of the requirements for satisfactory results an intelligent and coöperative patient. If you have this sort of individual to deal with and he fulfills all of the other requirements for successful treatment there is no reason why the artificial pneumothorax treatment cannot be carried out successfully at home. I even see no reason why the patient should be started in a sanatorium unless he happens to be there at the time. I believe that all candidates, with certain exception, should be given the advantage of sanatorium treatment before applying compression. So many cases of pulmonary tuberculosis will heal spontaneously that I do not feel we are justified in interfering with natural resources unless our experience leads us to feel that the particular case cannot get well without artificial relief. We attempt to stop uncontrollable hemorrhage with this treatment wherever the patient may be. Many having such hemorrhages are at home and we bring treatment there. Most all of my cases that were started at home were started for this reason. The intelligent and serious minded patients will coöperate and it may be unnecessary to remove them elsewhere for treatment. The unintelligent and indifferent will not coöperate at this time, neither will they coöperate after they leave the sanatorium where treatments were begun and continued for a length of time. Perhaps the chief objection to starting the treatment at home is the possibility of accidents. These can be taken care of at home as well as in the sanatorium."

Dr. M. Taschman, New York City, April 8, 1926: "For many years I have practiced



the artificial pneumothorax treatment in selected cases of pulmonary tuberculosis at home. Obviously, the technic is the same, whether applied in the home or in an institution. The chief considerations for the successful issue, lie with the patient. Therefore, it is necessary to individualize every case, and in arriving at a decision to study not only the medical phase of every case but also the social and economic."

Dr. Charles L. Minor, Asheville, N. C., April 19, 1926: "Tuberculosis can be treated anywhere though long experience with use of this climate satisfies me that climate has a distinct value. However, many cases cannot leave home and it is essential for the profession to work out a system of treating them in their homes. The chief disadvantage in the home is psychologic. I have used artificial pneumothorax now for 14 years and while, of course, it often fails I have never hurt anybody by it and I have saved a great many lives. I feel that no one treating tuberculosis can afford not to master it thoroughly. If they can adapt themselves to a sanatorium atmosphere they will do much better in the long run."

Dr. S. Adolphus Knopf, New York City, April 13, 1926: "The physician administering artificial pneumothorax should realize that he is performing a surgical operation and that it must be done with the same aseptic or antiseptic care which is exercised today by every conscientious surgeon before, during, and after an operation, whether this operation is done at his office, in the home of the patient, or at the hospital. If the patient is afebrile, in good condition physically and mentally, and not too apprehensive, the operation may be done at the physician's office."

The matter of home treatment of tuberculosis has been experimented upon by the New York Home Treatment Association and also by Dr. Pratt, of Boston, who finds that success in the treatment can be just as good at home as in the sanatorium. It is a well known fact that the greatest number of tuberculosis patients are not treated in but outside of sanatoriums. The cases that have come under my observation for the past 7 years, and which I have

summarized, were cases that either refused sanatorium treatment or for one reason or another were unable to go there.

I will not at this time go into a detail of the history of artificial pneumothorax, nor its *modus operandi*, other than to say that since its inception by Dr. Carlo Folioim and use by John B. Murphy in Chicago in 1898, it has come to be considered as an extremely valuable measure in the treatment of pulmonary tuberculosis. During the past 7 years I have seen 219 patients requiring artificial pneumothorax and in each case, an attempt was made to administer this treatment. Of these 219 patients, 71 have since died; 51 have been lost track of; 29 started the treatment but due to adhesions no further attempt was made to continue the treatment; and 68, or 31%, are living today. The treatments extended over a period from 1 to 6 months duration in these cases. From 3 to 15 refills were given. The patients ranged in age from 8 to 66 years, and there were only 2 cases of pleural shock and 1 case in which fluid developed after the second operation. The results speak for themselves.

What are the objections to home treatment? The following are claimed by those advocating sanatorium care: (1) Possibility of accidents. (2) Personal inconvenience to the attending physician. (3) Lack of funds to carry on the treatments to completion. (4) Lack of fluoroscopic and radiographic control. (5) That it is theoretically sound but fraught with many difficulties. (6) Poor environment, and psychologic enthusiasm for first few treatments but which lags later on. (7) Danger of infection and lack of control.

What are necessary requirements for successful home treatment? Briefly enumerated they are: First and foremost, an intelligent and coöperative patient; a light and sunny room; proper isolation; necessary and proper food; proper routine; asepsis; disciplinary measures; and, the psychologic factor, namely, a happy environment.

In the majority of cases I find that patients can be made to conduct themselves at home and live in the same manner and follow the same instructions as in an insti-

tution, unless it is impossible to isolate the patient in the home. As for checking up collapse by x-rays and fluoroscope after the first injection, there is no necessity for x-rays or fluoroscope. Nothing of value is added because the small amount of air given will not show much. I usually follow up these by portable x-ray in febrile, and office fluoroscopy in ambulatory cases.

Out of 100 cases of tuberculosis treated by me last year, only 5 have been sent to a sanatorium. I am of the opinion that the treatment of tuberculosis by artificial pneumothorax can be accomplished just as successfully at home as at a sanatorium. The operator should not give the first treatment unless he has an assistant. It is most important that the first treatment be given in the patient's home rather than at the office, with the help of an assistant. This makes it possible for a most successful treatment. The assistant physician is present to see that any emergency, such as pleural shock or hysteria, can be attended to immediately so that the operator will have nothing else to do except administer the air, watch the manometer, and look out for the welfare of the patient. The sterilization of the instruments and all other details for a successful operation can be attended to by the assistant.

In the 200 and more artificial pneumothoraces, approximately 1800 refills, which I have given in the last 7 years, I have always made it a point to give the patient as little air as possible and I believe that this is the reason why I had only 1 patient who developed fluid. I can recollect that I had only 2 patients who experienced pleural shock and in 1 of these cases it was due to the fact that after the pleura was cocaineized I withdrew the small needle and inserted one of much larger caliber. It seems to me that the greater the bore of needle, thus injuring more pleura, the greater the possibility of shock. Furthermore, I have observed many times, that when the patient is in a terminal stage, with difficulty in breathing, due to the lung tissue being almost destroyed and filled with secretion, that by giving the patient a small amount of air and causing a slight partial collapse,

he is made more comfortable and feels better, and the end, if I may say so, is not as laborious as when he is merely left alone. I find also that when artificial pneumothorax is given in incipient or moderately advanced stages, the patients are much more benefited and a greater number able to return to work than the far advanced cases.

The rapid construction of sanatoriums within recent years all over the country, with no special claim for climate, speaks for itself; namely, that climate is not very important in the cure of tuberculosis and that the individual can be treated everywhere. Good results are being claimed all over the country. The patient who refuses or who is unable to go to a sanatorium must be treated somewhere and must be taught to adopt the methods of the sanatorium at home and he should have as much help as science can give him. The operation can be done in such manner that he will not be afraid of a refill.

The success of home treatment of tuberculosis depends upon constant attention to hygiene, sanitation and details, and upon the intelligent coöperation of the patient. Just as, in years to come, each physician with his knowledge and practice of modern hygiene and methods of preventive medicine will be a board of health unto himself so will each tuberculous home have its prescribed method of sanatorium control.

#### DISCUSSION.

**Dr. Samuel B. English** (Glen Gardner): I am very glad to say, in connection with Dr. May's paper, that we who are actively engaged in the treatment of tuberculosis can subscribe to most everything that he has had to say, and I am also glad to note that he is not imbued with that superlative enthusiasm which usually, in relatively new types of treatment, to a certain extent kills its beneficial effect.

There can be no doubt that the strides of heliotherapy within the next few years are going to be exceedingly rapid. I know but little about the treatment of tuberculosis by x-rays, other than a few cases of adenitis that we have so treated with favorable results.

I do remember seeing one case, 5 or 6 years ago, in which a patient had suffered for a number of years a discharging sinus, following an old empyema. That sinus had persisted, in spite of everything that could be done, for a period of 3 years. One treatment of deep x-ray therapy was followed by its closure and it stayed closed for a year and a half after that. I don't know anything about the patient since that time, but a



number of other patients were treated by the same man and by the same procedure, but with very dissimilar results.

I am glad the doctor emphasized the fact that it is a useful adjuvant, because, after all is said and done, the best treatment for tuberculosis is the ordinary, hygienic, dietetic treatment, supplemented with such agencies as he brings forth. We in sanatorium work constantly see patients, whom we believe should be doing well but who, for some reason or other, are not doing so. Many of our pulmonary cases, with definite signs, with positive sputum, who should progress, we find going backward. Many of these patients we believe have, in addition to their pulmonary condition, a tubercular enteritis, and it is even to the skeptics, a revelation to see what heliotherapy will do for these patients. I have seen any number that have had all the advantages of sanatorium treatment, to the superlative degree, continue to go backward, and then get the advantage of heliotherapy with the mercury quartz lamp, because this section of the country is not admirably adapted for the treatment of tuberculosis by sunlight—you have it one day and you haven't got it the next day—and as a result of the added treatment they make marked gain. It does seem to me that any institution, at least (because it is rather difficult to give heliotherapy to any great extent, outside of institutions), that is treating tuberculosis of any type is not fully equipped if it is not availing itself of some type of heliotherapy, and I believe in this section of the country the mercury quartz lamp is more beneficial than sunlight. On the other hand, I believe that there is no type of treatment which needs closer checking and a more guarded technique than heliotherapy. I believe again, that a good many of the ill effects that have been ascribed to heliotherapy have been due to injudicious handling.

We who live with tuberculosis see other conditions that would go a long way toward convincing the skeptic. Although the doctor doesn't seem to claim very much for heliotherapy in kidney conditions, I have seen within the last 5 years at least 6 T. B. kidneys, 4 of them having tubercle bacilli present in the sputum; one of them probably not having active lung condition, but 4 years ago had his right kidney taken out as the result of a tubercular lesion, and 2 years after that he went down with his left kidney. The man got so that he could hardly stay from the urinal. A little bit later, he got so he could hardly urinate, due to the fact that he was filled up with blood. In addition to the ordinary hygienic dietetic treatment, that man received the Alpine lamp or the mercury quartz lamp treatment, and he is now able to work 8 hours a day, and he has recently taken a full-time job. That may have been a coincidence.

I remember now another case that we had at Glen Gardner 5 or 6 years ago, with positive sputum. He came back to us 2 years ago with positive sputum, with a 4+ Wassermann, and with a tubercular kidney. That is a pretty good picture. It is enough, at least, to make a man sick. That man was on quartz lamp treatment for a year and a half and he is now doing a full day's work.

Perhaps these patients would have gotten well without it, but I believe that the quartz lamp in those cases has done them lots of good. It certainly appears to us that our tubercular peritonitis, even of the exudative type (that is, accompanying active pulmonary tuberculosis with tubercle bacilli in the sputum), is benefited by

heliotherapy. We have a little girl at the Sanatorium at the present time, about 14 or 15 years old, from Cape May County, and there is no question that that girl is being very much benefited by the lamps.

We have seen a number of cases of lupus in which it has been hard to convince ourselves that the lamp hasn't been of benefit. We undertook to check some of them through the laboratory. There seem to be differences of opinion as to whether or not you do, from a laboratory standpoint, get a changed blood picture, but it certainly appeared to us, in about a dozen cases that we checked, that we got an increase of lymphocytes, that we got an increase of red blood cells, and that we got an increase in hemoglobin.

So, personally, I am rather optimistic as to the amount of benefit that a patient can get as a result of heliotherapy, properly given, and properly watched. If you don't give it properly and if you don't watch it properly, like any other type of treatment, you won't get anything out of it.

In connection with Dr. Fine's paper, I think, that on such a subject as he presents, we sanatorium men would naturally have a different opinion. The best treatment today for tuberculosis is continued rest, it doesn't make any difference whether you have a surgical tuberculosis, a pulmonary tuberculosis, or what kind of tuberculosis you have. And there is no one who, in the early stage of treatment, irrespective of the involvement in the patient's lung, is justified in telling you what is going to happen as a result of conscious and strenuous hygienic dietetic treatment without pneumothorax. We who see patients constantly, frequently have brought back to us, 2 years after we made an unfavorable prognosis, a patient who is in mighty good shape—that just goes to show the weakness of our ability to properly judge.

In the treatment of 219 cases, Dr. Fine says that 71 didn't do well, something else happened to 21, and 68 (or 31%) were finally cured. I don't think he has any grounds at all upon which to base his opinion that those patients wouldn't have been just as well or better off without pneumothorax had they had the advantages of well-regulated sanatorium or hygienic dietetic treatment.

I am inclined to think, personally, that we look too lightly upon the administration of artificial pneumothorax. I don't believe it is a minor operation.

Dr. Fine talks very glibly about pleural effusions in 1 case out of 219. That is the best record, I believe, anybody has ever made. You can take 2000 cases, or you can take anybody's books, or any hospital records, and they will tell you that anywhere from 40% to 50% of these cases get pleural effusions—and that is not the worst part of it. You can go to any institution that is continuously doing pneumothorax work and they will tell you that a certain percentage of these cases that get effusions become infected and develop empyema.

Again, we have been rather fortunate (I don't know how many cases we have treated) but we certainly have not had the magnificent results that Dr. Fine has had, of but 1 case out of 200 developing fluid. We have had some cases in which they developed fluid and became infected, and I think that is the experience of most every one else.

I deplore the treatment without close x-ray 'checkup. No one can without its aid success-

fully exclude the presence of complications which he says have not in his series occurred. I believe most men experienced in this type of work will so agree.

No one attempts to exclude home patients from its benefits. Not only, however, due to the superior advantages for the inception of this treatment, but also on account of the general knowledge and education received by a patient, do I maintain that treatment can best be started in the sanatorium; and later, when proper study has been made, the patient under capable supervision, may be allowed, if he desires to do so, to continue the treatment outside.

Any discussion should make clear, however, that this treatment demands continued and careful study, and observation.

**Dr. Ralph H. Hunt, (East Orange):** Dr. Fine asked me, along with Dr. English, to discuss this paper of his. We who do tuberculosis work and who are not sanatorium men have to do our work in the homes and I, for one, from my experience, can see no reason why patients who refuse to go to a sanatorium, or patients who have graduated from a sanatorium and have failed to benefit, after careful observation, examination and experience, should not have the benefit of artificial pneumothorax in their homes. I know that it can be done. I know that it can be done successfully because it has been my practice for some years.

It has always been our principle in handling tuberculosis patients, first of all, to advise going to a sanatorium. I think the reasons are perfectly obvious. I urged the sanatorium not only as a place of treatment but as a college, a place where people can be educated in tuberculosis. Our sanatoriums are splendidly equipped and the men in charge are everything that can be desired. I am familiar with them all and know their work. I would trust my patients to any of the county or state hospitals established in the treatment of tuberculosis and feel absolutely confident that they would receive perfectly good scientific care. But we who treat patients in the home have a little different viewpoint from the men who treat patients in a sanatorium. The psychology of these patients is peculiar. Oft-times a family tie (a wife, children, father or mother), or economic responsibilities will bring so much pressure to bear upon these patients that they are not happy in a sanatorium and they cannot do well there, and they won't remain there; they come home. I see no reason why these patients in the home should not be given the benefit of such a measure as artificial pneumothorax. Anybody who has had any experience in tuberculosis will admit that it is a real measure, when properly applied to suitable cases, and when used by a man experienced in the art of doing it.

So, while I may not agree with Dr. Fine in the general use which he makes of the measure, I do agree that in the hands of a careful man, used with discretion, the measure can be applied successfully in the home. I am speaking from experience. Of course, one has to get the confidence of these patients. They must have good surroundings, and everything else has to be done which would be done to relieve a patient of tuberculosis by general measures, such as food, rest and the proper regulation of exercise.

I assume that any man who would attempt to give an artificial pneumothorax in the home would be conversant with the principles of treatment which are held today to be best in tuberculosis. I agree with Dr. English that we have

nothing which compares with the ordinary rest treatment for tuberculosis, with properly regulated exercise and diet.

No one can tell whether these patients might not do well without such a measure as artificial pneumothorax. After all, that is an artificial thing. It is a major operation, and it is a serious thing. But, on the other hand, we mustn't forget that the life of a patient is a serious thing, too. Many of these people upon whom we advise pneumothorax are doomed; they have had the benefit of the best there is; they have had the benefit of rest, careful dietetic treatment, and all that science knows today. In spite of that, they have relapsed and fallen back, and those who have had experience in tuberculosis can pick out these patients as those that are doomed to die. It is among this class of patients in the home that one will find cases that may receive benefit from artificial pneumothorax, and I am sure that even though there is some risk in doing this operation on this class of patients, there is a great deal more risk in not doing it. We are between the devil and the deep sea. The patient must take a chance; otherwise, he is playing a losing game.

I was very much interested in Dr. May's paper. I have had 2 personal interviews with Dr. Lawrason Brown, having been his guest several times at Saranac Lake. Twice I have put this question to him, at Saranac Lake, where there were a great many mercury vapor quartz lights to use. He said, "Dr. Hunt, I do not know that I have ever benefited a case of pulmonary tuberculosis with the mercury quartz vapor light."

I am speaking of this simply because the mercury quartz vapor light is apt to have the same place in the doctor's armamentarium as a cabinet of vaccines and the old vibrators. It is so easy to place a patient on a table, press a button, and give him an exposure to violet rays, and expect him to do well, and in the meantime, in the enthusiasm of both the patient and the physician, lose sight of the essential things in the treatment of tuberculosis, such as enforced rest, careful diet and all the other adjuvants which we use in the treatment of tuberculosis. It is a terrible disease to fight, and I am sure that we are all anxious to know if there is anything which can aid us in saving the lives of these sufferers, or in aiding us to put a man back to work who has been disabled from the disease. If the light will do it, we will all welcome it.

**Dr. B. S. Pollak (Secaucus):** I think it is a most fortunate circumstance that these radical departures from the ordinary, accepted methods of treatment of tuberculosis are today discussed within the most conservative state medical society in the Union. These are both excellent papers, and more time should be allotted to them for discussion than is available this afternoon.

It was my pleasure 2 years ago, at the time of the International Union Against Tuberculosis, to visit, at the invitation of the Swiss Government, all the institutions in Switzerland where heliotherapy is being demonstrated. Of course, when we speak of heliotherapy and its application in the home and in the average institution, we cannot very well compare it with the way it is administered in the excellent institution of Rollier. Rollier not only has climate, but he has a peculiar condition which practically no one else, to our knowledge, has. Rollier, of course, treats mostly surgical tuberculosis and, by "surgical tuberculosis" I mean tuberculosis of the bones, of the glands and of the joints.



If we remember the findings of the Royal British Commission, the studies of William H. Parks and the studies of the Imperial Board of Health of Germany, we know that most tuberculosis that is designated as surgical tuberculosis is of a bovine origin, and, in very many of these cases, the tuberculosis is confined entirely to bones and joints. We know that these commissions have positively stated, and so has Parks that most glandular tuberculosis, is of bovine origin, and we know, too, that the bovine tubercle bacillus is of a much milder type than the more virulent human type.

In all these institutions in Switzerland, with the exception of Rollier's (where I saw no tuberculosis of the lung, that is, manifest tuberculosis of the lung) I received a positive statement from the medical directors and heads of the institutions that they had absolutely no faith in the treatment of pulmonary tuberculosis by means of heliotherapy or any other ray therapy. We must not forget, as Dr. May has brought out, that tuberculosis is not a local process and therefore cannot be treated locally by the application of rays. I assume that Dr. May, when referring to treatment by rays, meant principally Roentgen rays, but if he meant heliotherapy, that must be excluded. Knowing, therefore, that the tuberculous process within the system, particularly of a pulmonary lesion, manifests itself by systemic evidences, we must refrain from applying any sort of ray because rays have been shown to positively increase the irritation, and, because of the increase in irritation there is a corresponding increase in our thermometric findings.

There are some local conditions that are, of course, benefited by the treatment of what we now call the quartz lamp, as Dr. English has stated, and as all of us who are familiar with tuberculosis work have found. But, after all is said and done, is not this treatment accepted simply because of its psychologic impression on the patient? Let us remember that physiotherapy has more to do with psychotherapy than anything we know of at the present time.

With regard to the other subject that Dr. Fine presented, while he hasn't asked me to discuss his paper, I am familiar with the treatment by this method. I think at the present time we are giving pneumothorax to some 50 cases. I do not wish to talk along the same lines as Dr. English did, but he is absolutely correct. It is not a simple process. It isn't a thing that we can decide by absent treatment. Ah, my friends, home treatment offers a splendid opportunity for us to say that the person has no fluid or has no complications, for at home there is not the incriminating evidence of an x-ray examination or of a fluoroscope, which will indicate the presence of fluid. Even the most experienced of us, those of us who have had experience in examining thousands upon thousands of these cases, sometimes fail to perceive the dullness at the base of the lung which indicates the presence of fluid, and so, naturally, it escapes us.

Accepting perhaps all that Dr. Fine may have said about his 219 cases, and accepting perhaps everything that he has said about the excellence of the institution, does any one consider it physically possible to introduce a system that can be counted upon to give results within 1 to 6 months? Why, we have seen cases come into the sanatorium and into the city hospitals that were practically moribund, and we have seen them gain 20, 30, 40, 50, even 60, and in one case 79 pounds, without any pneumothorax.

I remember that some time ago, in Boston, the famous Dr. Minor, whose name has been mentioned here, asked one of the group from Saranac Lake, "How long should this treatment be continued?" Some of them said 2 years, some of them said 3 years—and that was the opinion of the brains, the culture, and the quintessence of knowledge on this subject. We haven't been able to tell up to the present where or when this process should stop.

For myself, I should not care to introduce this method of treatment into the home, as I wrote to Dr. Fine when he asked me. We had a case recently in which the patient didn't want to go to the hospital. What was the result? We gave a pneumothorax in the home and every second or third day we had to take her to the hospital in an automobile in order to x-ray her, or rather to fluoroscope her, and to my great chagrin, I found that the water line was gradually coming from base to apex. We found it by physical examination, but we also found it by fluoroscope.

In conclusion, let me say that there is nothing like experience that will make us be careful about such things. In the early years of practice in tuberculosis, we did everything that came to us, but we are more conservative now. I saw a woman in Newark the other day who had received the treatment by Friedmann, when the Friedmann turtle cure was here, and she had an infected arm. She was in a terrible condition. She came to us, and we were then enthusiastic about our treatment with tuberculin; we gave her tuberculin treatment and the woman said to me the other day, "Look, doctor, what you did for me! You cured my arm with tuberculin!" If I were writing statistics, I might be induced, if I weren't past fifty, to put myself on record as having cured this arm with tuberculin. I know that I didn't cure it, but she gives me the credit.

The doctor has had only 1 case of pleural effusion. I wish to congratulate him, because that is an extraordinary accomplishment. And if the doctor has never had any unhappy results, I wish to congratulate him once more, for I have a very competent man with me who does my pneumothorax work and only the other day he inserted a needle into the pleura, and before even administering the air into the pleura, the poor girl died. Of what? The doctor says pleural shock. Well, it may have been pleural shock, but some of us are rather of the opinion that all these cases of pleural shock are really cases of air embolism.

So I would say that while, on the one hand, heliotherapy is perhaps doing some work for us (beneficial at times, psychologic very often), pneumothorax is a process or a method that ought to be adopted by us with care and that ought to be done under the most careful surroundings, preferably in institutions, but if done in the home, it ought at least to be very well corroborated by clinical, physical findings and by x-ray confirmation.

Finally, let us remember that many hundreds of cases of tuberculosis have been cured all over the world, regardless of climate, in city, county and state institutions, in affluent and rich institutions and in pauper institutions, and they have been cured because of food, of psychology, and of rest. Rest will do more for us in the treatment of tuberculosis than pneumothorax ever will do or has done, either in the home or the hospital.

**Dr. W. G. Hermann** (Asbury Park): I think Dr. May said that this was purely an adjuvant treatment. I have just one or two thoughts to give you along this line.

The question often arises with tubercular adenitis, so-called, as to whether we shall use surgery or some other form of treatment. I dare say that one gland is never involved alone. Consequently, in many cases when you come to operate, you will find the glands widespread, although clinically you cannot palpate them. I think if any case of tubercular adenitis is to be treated surgically, it should certainly have, in addition to the general forms of treatment (dietary and rest) that we use, some adjuvant form of treatment such as radiation antedating or following the surgery. Hess and others have proved that ultraviolet or actinic ray therapy, as well as cod liver oil, has specific effect in rickets, and it works through calcium metabolism. Certainly we know that the latter is one of our means of defense in tuberculosis, particularly in gland tuberculosis.

Just before I came down here, I had a case in the office which I finished treating over a year ago with the ultraviolet ray for cervical adenitis. I had this child back for observation, took a radiograph of the cervical region and found calcium deposit in the area of involvement. There was no sign clinically of any activity. The scars smooth and soft, and the child was in good shape. I think stimulation of calcium metabolism is probably one of the ways in which our ultraviolet light is serving as an adjuvant.

In another case, a man of 60 was operated on supposedly for carcinoma of the stomach. Diagnosis was made clinically and radiographically. When he was opened, he was found studded throughout the abdomen and all over the liver with tubercle nodules. The gastric deformity that had been diagnosed as carcinoma was gross adhesions. This man was closed up, with the idea that he was going to die. Of course, I am familiar with the reports of peritoneal tuberculosis being cured by operation, some authorities claiming it is due to opening the abdomen to the air and some that it is the etherization. But I feel very sure that if this man had been left alone, he would be dead today. He is a clergyman; this was 3 years ago, and he is now performing his pastoral duties without any trouble whatsoever, and looks the picture of health.

I have forgotten whether it was Dr. May or some one else who spoke of being able to determine prognosis by pigmentation. I had a man who colored up very decidedly, so that he was dark brown all over the abdomen and the back, and whose response to treatment was prompt and rapid.

I should like to cite 1 other case, in reference to kidneys. This patient had a kidney removed, a tuberculous kidney with a long draining sinus. After 8 months of the quartz lamp (and by that I mean the water-cooled), with the applicator placed deep in the sinus, and with generalized air-cooled application over the body, the sinus completely closed. That was about 2 years ago. This patient has had no further trouble and no clinical evidence of tuberculosis.

I think Dr. May was quite within his proper confines when he spoke of this being an important adjuvant. In the treatment of tuberculosis, I don't think you can overlook any one feature, and I don't think that there is any one feature that is the whole story—we might say treatment consists of a group of "adjuvants".

**Dr. Abraham E. Jaffin** (Jersey City): Dr. Hunt touched upon a point that has been for some time one of the difficulties that I think the public and the profession (particularly the public) have had to contend with in regard to heliotherapy. Artificial heliotherapy is so easily available to the physicians that it has become, as he says, something like a stock vaccine with which to inject the patient, and let it go at that—that is, touch a button, expose to the ray, and let it go at that. The result is that we are seeing a great many cases of advanced tuberculosis patients who have been treated to the point of desquamation, and what not, by men who have little knowledge of tuberculosis, no matter how much they may know about the technic of using the Alpine lamp.

My suggestion here now is, at the risk of making myself very unpopular, that we adopt a policy something like this: Any patient who can pay for an Alpine lamp treatment 3 times a week (and surely it is hardly worth while giving unless it is given that often, although we ought to give it daily if we are going to use it at all) is rich enough to rent a lamp, and then apply the rental, which I think is \$100, for 3 months—

**Dr. English:** It is \$75.

**Dr. Jaffin:**—toward the purchase of the lamp, which the companies are willing to sell. Then, those poor people who cannot afford to rent a lamp can usually find clinics available in all the larger cities, even if they have to travel a little distance, where they can get the required amount of treatment. In Jersey City, for instance, today we have 3 clinics that I know of, where any patient, no matter what his circumstances, can receive treatment. Yet I am quite sure there are any number of physicians there and in other places, who are not using the lamp, but **abusing** it, and I feel that this is the proper time to raise that question, at the risk of personal unpopularity.

With regard to Dr. Fine's paper, I think there is much to be said on both sides, and I agree with much that Dr. English has said and a great deal that Dr. Hunt has said, but I think the leading point is this: we will all agree, the majority at least, that the initial fill should be in a sanatorium or a hospital; then, if the patient refuses to go to a sanatorium, perhaps he won't object to going to a hospital for a day or two, and continue his artificial pneumothorax at home.

**Dr. Ernest A. May** (Newark): I thank the gentlemen who have discussed my paper. I shall make my closing discussion very brief.

Dr. Pollak spoke of the psychologic effect of the ray treatment. I should like to ask Dr. Pollak, when he sees the massive glands on the neck melt away under treatment by Roentgen rays and heliotherapy, whether he thinks that this is only due to the psychologic effect.

With reference to the point about calcium metabolism that Dr. Herman mentioned, you will find that covered in my paper. I had to make this short, in order to cover the field within the time allowed. It is such an immense field that it is really impossible to go into further details.

**Dr. M. James Fine** (Newark): The bomb has finally exploded. After presenting papers for many years before the National Tuberculosis Association and before this State Medical Society



on the subject of artificial pneumothorax, at last a few tuberculosis men have come out into the open.

I have been severely attacked and ridiculed because I stated that 219 cases had been given artificial pneumothorax. Dr. Pollak states that in his institution he has given 50 in the last 4 months, since he started treating tuberculosis by means of artificial pneumothorax. I question that. Because that would be 40% of the total cases in his sanatorium which I say is abnormally high and could never be brought about save by unprecedented conditions which I do not believe existed.

I had one of Dr. Pollak's cases in my office last week, a patient referred from Saranac Lake. That patient had been found to have fluid in the chest and I told her emphatically that she could not be given artificial pneumothorax, because she had fluid. I said to her, "As long as you have a normal temperature and you have fluid, you may as well leave it alone".

I didn't say a word about treating tuberculosis without checking up by means of x-rays. I state very plainly in my paper (and I gave it to Dr. English to read) that I check up every case by x-rays and fluoroscope. I have a fluoroscope in my office and every case is checked up. If the patient cannot come to my office, I take a portable x-ray machine to him.

I will state again that I have had only 1 fluid case out of the 219 cases, and there are some physicians right in this audience who can bear me out when I say that I gave artificial pneumothorax 5 or 6 years ago. The reason for this almost uniform success is due to the small amount of air injected and early discontinuance in collapse. Dr. English, himself, knows that he has some patients in his sanatorium to whom I gave artificial pneumothorax. I think to attempt to give pneumothorax in 219 cases is quite a lot and I question whether, with the exception of Dr. Runnells, anybody else in this state has attempted to give that many. I started giving pneumothorax under Dr. English's instructions and I have followed it up since then. That was 7 years ago.

I am advocating home treatment for tuberculosis, on the system of sanatorium care. I emphasized both in the beginning of my paper and in the end that everything must be equal before an artificial pneumothorax can be given. Therefore, in the case of some patients who should have had artificial pneumothorax I didn't give it to them, because their home conditions were such that I couldn't proceed. I think all those things should be taken into consideration before criticism is made. I don't claim any beneficial results other than those stated in my paper.\* I stated that 70.6% died after giving the artificial pneumothorax. Whether they would have died if it hadn't been given, I don't know. I don't claim any very large results at all.

I knew Dr. English's views on this subject and I therefore asked him to discuss my paper. What I cannot understand is his reprehensible attitude as revealed in this attack. I also asked Dr. Hunt to discuss it, because he is doing home treatment of tuberculosis. Dr. Pollak discussed my paper before this body 2 or 3 years ago, when similar results were reported.

I thank you very much.

## GLEANINGS FROM FORTY YEARS OF GENERAL PRACTICE.

GEORGE B. PHILHOWER, M.D.,

Nutley, New Jersey.

First of all, I want publically to express my very deep appreciation to the Committee on Program for the glorious privilege which it has given me of telling to so many of my loyal colleagues, from all parts of the state, and to so many interested, patient laymen, a few of my notions which I have acquired in 40 years of general practice. I hold no man but myself responsible for them, for all of the conclusions are drawn from my own private practice. After all, they may be but harmless obsessions, but such as they are, I want to leave them as a legacy, or kind of valedictory, to those who, like myself, care for society at its bedside when it is desperately sick and likely to die if we do not know our business and do our work well.

If the first personal pronoun occurs with tormenting and monotonous frequency, I shall plead in extenuation that in 4 brief letters to the Phillipians the Apostle Paul used it 116 times, and Theodore Roosevelt in one brief speech used it over 100 times. I have been an ardent student of the gospel of the former all my life, and of the politics of the latter for many years.

It is indeed a glorious privilege, for it is given to comparatively few doctors to remain 40 years in general practice, for they wear out with the slavery of it and die, or else become specialists.

One of my pediatric friends, in a jovial vein, once said to me: "When Doctor Winters and you are dead, there will be no more top milk feeders, for there are but 2 of you alive now". That was several years ago. Still when I opened the latest text-book on infant feeding, for the purpose of devising a formula that might agree with a modern baby, I found every single formula contained a fair amount of cream from the "top 16 ounces". Dr. Winters has since gone to his rest, and to his reward, and "I

only am left to tell thee". So, if you believe my friend, you see, that in a few years you will be in a bad way.

If we heed the cry of the current journals, both lay and professional, it would seem that when we few older general men are gathered to our fathers, there will be no more of us to come to your homes and treat the diseases which will not permit you to come to our offices. But with the experience and egotism that come with age, I am not willing to admit that society can do without us, hence if we are to continue to carry on all along our vast lines, it behooves us to keep strong by adopting the latest and best methods of diagnosing and treating the almost innumerable ailments to which human flesh is heir.

Of course, we have all seen marvelous strides made in the conservation of human life, and in the mitigation of the suffering of the race of men during the last 40 years. The new operations in surgery, and the instruments of precision which have made them possible, shall not be enumerated at this time. While the lay journals are always trying to exploit the wonderful operations of surgery, and society stands amazed at the good results of them, it is not to the surgeon, but to the physician to whom I must award first place in reaching out and saving the human race and relieving its sufferings. Surgery reaches the individual, and is marvelous and wonderful, but medicine reaches the masses, entire nations; in fact, its application is limited only by the confines of the globe itself. For example, Asiatic cholera, yellow fever, smallpox, and the plagues, of all kinds, have been subdued by medicine.

Among the physicians, I would give first place to the pediatricist. Forty years ago, one-third of all the children born died before they were a year old. This statement is taken from the records of my very capable and efficient professor, Dr. Joseph E. Winters. Now according to the New Jersey State Bureau of Health, only 6.2 per 100 die, a saving of over 26 babies out of every 100. This great improvement is mostly due to the advancement in infant feeding during the first year. It has been

developed by a strict observation of 3 invariable, fundamental principles: viz., First, we belong to a race that suckles its young, hence all natural baby food must come from an animal; it cannot come from the grain fields or the laboratory. Second, it must be clean. Third, it must contain only what is found in mother's milk.

If we are to continue this high standard, both the general practitioner and the mother must be cautioned. The general practitioner must be a little more particular as to details, he must give a closer supervision and a little more time to this most important branch of his work. The mother must first of all give her family physician full charge of her baby from birth. I know what she is going to answer me: "I want the best". But that is the only way you can get the best—by giving him your full confidence and trust, for it is he who comes to you in the night when the baby has the croup, pneumonia, appendicitis or an intussusception of the bowels, all of which conditions will prove fatal unless your family physician is kept strong and abreast of modern methods. You must clear through your family physician, but let the specialist report to him in doubtful or difficult cases of infant feeding. I have always had the advice of the best baby feeders in this country, and the harmony has been perfect; they have never stolen one of my babies.

#### DIPHTHERIA.

The greatest life-saving specific belongs to the pediatric branch of our profession, viz.: antitoxin for diphtheria. Before its discovery, 47 children out of every 100 afflicted with this dread disease died. Forty years ago, the prognosis in diphtheria was no more certain than tossing a coin in the air. If it came down heads, the child lived, if tails, it died; 53 chances that it would live, 47 that it would die. Now, from all sources, less than 13 out of every 100 die. In the private practice of a careful, skillful family physician, who gets his cases early, and knows how to use antitoxin, less than 1 in a 100 dies. Physicians must have a proper knowledge of the use of this marvelous cure. The dose must not be too



small, neither must it be too large. While I do not condemn large doses (for I give very large doses in laryngeal and nasal cases) I have a firm conviction that the tendency is to give doses that are unnecessarily large in the ordinary faucial and tonsillar cases; 3000 units are sufficient to control them. I still feel that being a toxin as its name suggests, the introduction of these overwhelming doses, unless opposed by an overwhelming amount of diphtheria toxin, must be injurious.

The mortality remains higher than it should be, due to 2 facts; parents do not call the physician early enough, and the doctors are frequently too slow in making the diagnosis. If the child be drowsy—I want the young mothers to listen to this—has a slight fever,—the fever is not high as a rule,—has a swelling of the glands of the neck, an offensive discharge from the nose, or has an attack of croup that is no better in the morning, the case must be regarded as diphtheria and the doctor must not wait for positive cultures. Many cases are well on the road to recovery before we can obtain a positive culture from the laboratory. If the disease be in the larynx or posterior nares, we may not be able to reach the seat with a swab, and it is only when it begins to disintegrate that we are able to get a positive culture. Oh, what a fine remedy it is! The man in the remotest district can save his children as well as the best specialist in the best city hospital. And, oh the pity of it! Parents let all kinds of cults treat their children, and the law makers continue to grant these cults licenses so to do, thus denying the right of little children to live.

#### TUBERCULOSIS.

Tuberculosis is curable. Tuberculosis is arrestable. We are making tremendous strides in curing, arresting, and stamping it out. But it is not due to any specific drugs, lymph, or serum treatment. The responsibility rests almost wholly with the general practitioner. No matter what the specialists tell us about it not being hereditary, it is only a hair-splitting scientific fact that the specific tubercule bacilli are

not handed down from one generation to another. We accept that, but what we do know is the strain, or soil, is inherited. In other words, "it runs in the family". That being the fact, it becomes the duty of the family physician to be on his guard in a family in which there have been deaths from tuberculosis for 2 or 3 generations. When a son or daughter in such a family has a tendency to asthma, or complains of fatigue on slight exertion, a fatigue that is out of proportion to the amount of exercise taken, he must not wait for fever, râles, loss of flesh and tubercule bacilli before making a diagnosis and beginning his treatment, for then the case is advanced. Of all these symptoms, I want to emphasize that of fatigue as being the earliest and the most constant one. Personally, I am very glad that this phase of our practice is being much more regarded than formerly. A fine paper on this subject in the May number of our Journal, by Dr. George B. Emory, of Morristown, should be read by everybody.

Having made a tentative diagnosis of tuberculosis, the general practitioner must not depend upon any specific treatment to cure his patients. Tuberculin, all kinds of serum, creosote, etc., have all failed. There are but 3 things to do for that patient. First, rest; second, warm fresh air; third, good food. The most important of these is rest. Briefly, that is all there is to it.

Here is where my tribute to the pediatricist is justified. I have but one case of active tuberculosis in my practice today. Now that I am caring for the second and third generations of children that have been properly, and carefully fed on clean milk. I find that constitutions have been developed and built up that are resistant to the tubercule bacillus. I have not a single child wearing a brace for tuberculous hips or knees, nor a child wearing a plaster cast for tuberculous spine, and as to a jury mast, I have forgotten what one looks like. I take no stock in the *lazy* germ. The physical part of man is animal, and healthy animals are not lazy, neither is normal man. Laziness is the insidious work of some disease which is eating away that fine young boy

or girl and it is our duty to discover what is wrong and save a useful life.

#### CANCER.

All cancers outside of the body, that is, all skin cancers, are curable by cutting wide of the mark and applying radium; or doing both. Again the responsibility for a cure rests with the general man who sees and diagnoses that irregular, so-called, cold-sore on the lip which does not get well in a week or two, or that bleeding wart, or that angry looking mole. He must not overlook, or look lightly, upon any of these, if he wants to save his patients from a horrible death. Cancer of the breast is not so certain, but if diagnosed early and given a wide removal, followed by radium, many of them remain well. Cancer of the body of the womb did well by an early removal before radium was employed. The same treatment and radium continue in this day to cure cancer of the body of the womb.

I still have hopes that radium applied at the cervix will cure many cases. At the present time, all I can say is that it is much the best treatment that has yet been applied. I have used in all of my cases, amputation, scraping, cauterizing, all kinds of paste, etc., and they have all failed. Radium has stopped their hemorrhages; it is no longer necessary to apply tampons in the night, and it is rarely necessary to give morphin for the relief of pain. It is certainly, at least, the best palliation that has ever been employed. Again the good results come by reason of the family physician sending his patients to a good gynecologist upon the first appearance of a drop of blood in a woman who has supposedly gotten through her menopause.

#### PNEUMONIA.

While we have made progress in the treatment of pneumonia, it may now be considered: "The Captain of the Men of Death".

Forty years ago, the mortality was somewhere around 25%, just where it had remained for the previous hundred years. Now it is around 18%. This improvement is not due to any specific, or to any serum treatment, but to the application of warm

fresh air, and a better understanding of the stimulating treatment. The disease is self-limited. I have never seen a crisis brought about by any kind of treatment. Keep the patient alive long enough and he will get well. From the initial chill, the vital forces must be conserved. Moving the patient, even from one bed to another, or from one room to another, or from his home to a hospital, or, I want to specially emphasize this, unnecessary examinations to find out just which lobe of the lung is involved, especially late in the day, should be interdicted, as it does no good, it does not get us anywhere, for we cannot control the involvement after we find it. Much better to spend our time in listening to the heart sounds; if they become muffled or indistinct, it is a signal of the gravest import. Any time in the course of the disease, a falling blood pressure calls for the beginning of digitalis. If the blood pressure continues to fall, go on up with the dose of digitalis. The practice of digitalizing the heart at the beginning of pneumonia and then stopping has never appealed to me. It is neither sensible, physical or physiologic in principle. A carpenter, in erecting a new house, does not take away his props and braces in the midst of a wind storm; he adds more. That is just what we must do in pneumonia. If we withdraw digitalis our patient may die before we can get him under its influence again. I have, or think I have, witnessed just such cases. When I am called to a case of pneumonia, I say, as did the Apostle Paul: "This one thing I do". I try and keep that heart going. All of the quick stimulants help, camphor in oil, nitroglycerin, strophanthus directly into the veins, adrenalin, etc., but they can never take the place of digitalis and strychnin as reliable stand-bys. It is my conviction that our dose is usually too small. One of my patients, apparently in extremis, was saved by 2 syringe fulls given 1 hour apart, and lived for 20 years after.

#### GALL-STONES.

Gall-stones, when positively diagnosed, are surgical and not medical conditions. There is no medical side to the question, for



no physician ever yet dissolved gall-stones in a gall-bladder of a living subject. He may wash out the small ones, but then he does not succeed in curing the disease of the gall-bladder that caused the stones. Of course, the big ones cannot be washed out.

#### ULCERS OF STOMACH AND DUODENUM.

These are both medical and surgical. The team work between surgeon and physician, to be successful, calls for the finest discrimination on the part of both physician and surgeon. Two of the finest surgeons in this state recently referred back to me for medical treatment a penetrating ulcer of the posterior wall of the stomach, in which the beautiful x-ray picture showed it buried in a mass of adhesions, thus making the case one in which a successful outcome after a surgical operation would be very doubtful. The patient has done very well for almost a year. Two other surgeons said it was my business to stop the bleeding in a duodenal ulcer before they would consider an operation. I concurred in their opinion, for all the cases that have come under my observation have died when operated upon during active bleeding.

#### APPENDICITIS.

Appendicitis is a surgical disease, it has no medical side, it must be dealt with surgically, and the time so to deal with it is as soon as possible after the diagnosis is made. The mortality remains too high, due to both surgeon and physician. The general men as a class are too slow in making their diagnoses. In the typical case, with pain, nausea and vomiting, fever, rapid pulse, rigidity of the right rectus muscle, pain at the McBurney point, with or without exudation, the case is plain, and the veriest novice would not make mistakes nor be too slow. Unfortunately, not more than half of the cases come to the general practitioner with these classical symptoms. In my opinion quite a large number still think appendicitis cannot exist without pain and tenderness at the McBurney point. If that great surgeon were to come back, he would set us right on this question. What he said was that pain at that point was always due to appendicitis, but he never taught that it

did not exist without pain and tenderness at that point. The very dangerous cases are the retrocecal and the pelvic in which we have only a very few vague symptoms to guide us. There are 2 which I think are very constant, but not very active, paroxysmal pain and nausea, and possibly vomiting. The pulse may be very nearly normal all the way through, there may be but little temperature, no tumor, no rigidity of muscles, even the leukocytes may not be over 13,000. What shall we do in these cases? Well, all that I can advise is that we become so obsessed with the idea of retrocecal and pelvic appendices, that we eat with them, that we sleep with them, that we take them around in the car with us until they become so much a part of us that we shall feel the diagnosis rather than wait for positive tangible symptoms.

I am convinced that I have never cured an active case by medical treatment. Yes, they have gotten well under the use of the ice bag, so-called freezing them out, but that has not proved anything to me, for more of them get well, and all of them do better since I practically scrapped the ice bag 20 years ago. As a result of my experience, and the closest observations, I have the temerity to state at this time that it is not good medical or surgical treatment. It inhibits the growth of the leukocytes, deadens pain, slows the pulse, lowers the temperature, in other words, it lulls both patient and surgeon into a false sense of security, it builds a crust over a volcano. So much for the sins of the general doctors. What about the surgeons? As previously stated, I have a firm conviction that desperately sick people do not do well when handled or moved much. If the young surgeons want to be of as much assistance to us as were their fathers, and want to keep their mortalities as low, they must learn to operate upon these desperate cases more frequently where we doctors find them.

A number of times, I have seen the appendix rupture and burst, like a rotten pumpkin, as my surgeons have dropped it into the pus basin. I cannot but feel that the results would not have been successful had they been moved, even to the best hos-

pital. We read of a great many deaths from ruptured appendices in the hospitals, and I think the moving has much to do with the disastrous outcome. A ruptured appendix is a very serious matter, hence it should be operated upon where we find it. Several of my patients have been operated upon on the dining-room table, in the living room (lighted by a kerosene lamp) in a stone farm house along the Morris Canal. They have all recovered. I cannot but feel that the results would have been different if they had been moved.

#### OBSTETRICS.

The general man is quite competent to continue this branch of his profession. He should continue doing all his versions, median and low forceps work, for he does them very well. High forceps, as an operation, should be discarded in favor of version or cesarean section. All women with an increasing amount of albumin, with an ascending blood pressure, after the seventh month, should be submitted to a cesarean section. It is much the safest procedure, and in the hands of a clean, skilful surgeon, is attended with a low mortality.

Puerperal fever is preventable, for it comes from the doctor and not from the patient or nurse. A 3 cent nail brush has absolutely abolished it from my practice many years ago. In all these 40 years, I have seen but 1 auto-infected case. Some pus was squeezed down from an old pyosalpinx in a very long and tedious labor. It being an auto-infected case, the patient recovered in a comparatively short time.

#### FRACTURES.

The general man should do most of his fracture work. Now that we have the aid of the x-rays, we know that the bone is properly reduced, and being properly reduced, it will unite as readily for us as it does for the surgeon specialist. We must, however, have them all x-rayed and leave nothing to chance. All open cases should be referred to the surgeon, but weigh all cases well before letting him convert a closed case into an open one. For some unknown reason, the closed cases, even if

not so nicely adjusted, do better than open ones with the nicest adjustment.

The greatest improvement is in the treatment of those very serious fractures near the elbow, or in the elbow itself, supra and inter-condyloid. These now recover with very little deformity and ankylosis when treated in the extreme Jones position. I think that the principal reason is that they cannot be so treated unless they have been properly reduced.

The painful and deformed wrists, the results of Colles' fractures, with all the various complex pistol shaped splints to overcome the deformities and prevent pain and stiffness, are now things of the past. Murphy's teaching of continuing the force until the distal fragment unlocks, and then sliding it in place, has solved the whole business. While we may not go as far as he said we might as to treatment, viz., "A postage stamp or a red handkerchief will keep them in place when completely reduced", we do find that well-padded anterior and posterior splints answer every purpose. I have reduced all kinds of these fractures while wearing my bath robe at 2 a. m. in my office and have had perfect results in every case. Fracture of the surgical neck of the femur in elderly people is always a serious accident. There are 2 schools as to treatment, those who claim good results by extension and sand bags, the other school who apply only the Whitman abduction method, and who claim that bony union cannot take place with the extension method and that they never fail with the abduction method. They are wrong in both statements, for I have seen perfect results with extension and have seen failures with the Whitman abduction. But without any further debate, I feel that the Whitman method should be adopted if the patient's condition offers any hope at all for escaping a hypostatic pneumonia and has a fair chance for bony union.

#### ACUTE INFLAMMATORY GLAUCOMA; ACUTE OSTEOMYELITIS, RUPTURED TUBE IN ECTOPIC PREGNANCY.

There are always 3 serious, and if not recognized, tragic ailments that hang over



the general man like hideous nightmares; acute inflammatory glaucoma, acute osteomyelitis, and a ruptured tube in an ectopic pregnancy. Acute inflammatory glaucoma will destroy an eye in a very little while, acute osteomyelitis will destroy a limb, or a life, in a few hours, and a ruptured fallopian tube will certainly destroy a life over night.

A red, painful, hard eyeball, with a dilated pupil calls for immediate help from a specialist. A child that has been previously well coming down suddenly with a chill, high fever, and severe pain near one of its joints, calls for a bold surgeon to drill straight down to the marrow, else a limb or a life is lost. A young married woman who has missed 1 or 2 periods falls upon the floor in a faint and collapse, who looks as pale as death, whose pulse is beating more than 100 a minute, and who has a panting breath, has a ruptured fallopian tube and every heart beat is filling her abdomen with blood. A good surgeon is demanded at once, else a useful life goes out.

We hear a great deal about the practice of medicine and surgery being too much for one human mind to grasp. Perhaps that is so, I do not know. But what I do know is that we general men are called upon in the night to treat diseases that will prove fatal to our patients unless we are skilful. No successful general ever knew every detail of a campaign, but he certainly is the one with the best idea as to where the enemy will attack. So it is with the successful general man, he may not know everything about everything, but he does know something about most things. It seems to me that unless we keep up the high standard of the general practitioner, that both society and our profession shall rapidly go on the rocks.

#### DISCUSSION.

**Dr. G. K. Dickinson** (Jersey City): Dr. Ill taught me a lesson a few years ago that I have been trying to live up to, and that is to sit in the front row and listen, and not talk much (Laughter.) But, coming back to Philhower, he is nothing but a kid—only 40 years of practice, and he is singing his swan song now. I am very sure that when he comes on to the years of discretion of Ill and myself, he will give us another paper, and a rattling good one, and he will cover everything in the encyclopedia at the same time. (Laughter.) However, I enjoyed Dr. Phil-

hower's paper very much, because between the lines I could see the troubles I have had with these many things that he has mentioned. I recalled how sometimes the good Lord brought things around happily and sometimes unhappily.

I find human nature has not changed a bit in my 50 years of practice, and I don't think it will change at all as Philhower continues in his work. He has done wonderful work up there in Nutley. Everybody knows Philhower. Everybody loves him. And the big part of practice is the psychology part, the love that you give to the profession, the love that you give to your people.

I listened to these T. B. men wrangling as to whether we should do the thing one way or another. It is all bread-and-butter. One man is paid by an institution and he fights for institutional treatment. Another man isn't affiliated with an institution and he fights for home treatment. If you transplanted those men from one place to the other, they would fight just the same. (Laughter and applause.) It is all a matter of grub.

Philhower has ended the day, and it has been a happy day for us because there has been so much peace and harmony, by giving us his experiences and I hope that when he comes around here 10 or 15 years from now, he will add to it. (Applause.)

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### CERTIFIED MILK.

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ELMER G. WHERRY, M.D.,

Newark, N. J.

(Presidential Address to the Essex County Medical Society at its 111th Annual Meeting, October 5, 1926.)

Twenty odd years ago when I attended my first meeting of this Society, an unsophisticated, carefree youth, with high ideals and great hopes and ambitions, I thought that one of the most wonderful things that could happen to anyone, one of the greatest honors that one could acquire, was election to the Presidency of this Society; and tonight as I am about to retire from that office I wish to state that I still consider it the greatest honor that can be given by the profession of the county, that I still cherish my high ideals and great hopes and I wish sincerely and heartily to thank you for the very great honor which you have conferred upon me and the very great pleasure which I have enjoyed for one brief year in my associations, especially with the members of the Council and other officers of this Society. Mere words are inadequate to express my appreciation, all I can do is to say "thank you"; or, perhaps I may be

allowed to quote Dicken's Tiny Tim, "God bless us, every one".

The topic of my address tonight is not the one which I had chosen and which I had prepared for tonight, but a topic which was thrust upon me, just a few days ago, first by the force of circumstances, and secondly by the earnest request of members of this Society, with whose wishes I am only too glad to comply. And in speaking upon this subject I feel it a great privilege to be permitted to honor a former member of this Society, a man whose name will go down the ages as an immortal, along with Jenner and Long and Pasteur and Gorgas, and the other great members of the medical profession who have not been content to simply follow in the footsteps of their teachers and predecessors, but who have forged ahead for themselves and given to the profession and to the world original ideas, so stupendous that it is hard to grasp their significance, in their relationship to the saving of human suffering and human life. Ladies and Gentlemen I refer to Dr. Henry L. Coit, and my topic tonight will be "Certified Milk".

There are a few of you here who know a great deal about Certified Milk, there are some of you who know something about Certified Milk, but there are a great many here who know nothing at all about it, and yet it was originated by a member of this Society.

Bulletin No. 41, published by the Public Health Service of the United States Government, says, "The term Certified Milk was coined by Dr. Henry L. Coit, of Newark, New Jersey, who in 1892 formulated a plan for the production of pure milk, under the auspices of Medical Milk Commissions. This plan contained the following general requirements:

(1) That physicians give their practical support to an effort conducted by a Medical Milk Commission, selected by a Medical Society, which shall endeavor to bring to the city a supply of milk produced under such regulations that purity shall be assured.

(2) That approved and trustworthy dairymen, possessing honor, financial ability and dairy facilities, shall be induced, by reason of promised medical support and the increased price of their milk, to conduct their dairies, collect and handle the product in conformity with the code of requirements, made by the aforesaid Medical Milk Commission, and imposed by it in due legal form.

(3) That the duties of the Commission shall be, first, to establish correct clinical standards of purity for cows' milk; second, be responsible for a periodic and personal inspection of the dairy or dairies, under its patronage; third, to provide for bimonthly expert examinations of the dairy stock by competent and approved veterinarians and for medical supervision of the employees by competent physicians.

"The milk produced shall also be subject to periodic chemical analysis and to bacterial counts, made under the direction of the Commission, as often as in its judgment is desirable. The experts employed by the Commission shall render their reports to this body, which constitute the basis of its certification of the product. The expense of examinations and inspections shall be defrayed by the dairymen, but the members of the Commission shall receive no pay for their services. The findings of the Commission shall be published to the profession only, and the milk thus produced shall be known as "Certified Milk" and be sold in quart containers, bearing the date of milking and the seal of the Commission.

In 1893, the Essex County Medical Society adopted this plan and organized the first Medical Milk Commission in the United States. A dairyman was found who was willing to undertake the production of milk according to the following standards of purity formulated by Dr. Coit, in connection with the original plan: (1) An absence of large numbers of microorganisms and the entire freedom of the milk from pathogenic varieties. (2) Unvarying resistance to early fermentative changes in the milk, so that it may be kept under ordinary con-



ditions without extraordinary care. (3) A constant nutritive value of known chemical composition and a uniform relation between the percentage constituents of fat, proteid and carbohydrate.

A rigid contract was drawn up and signed May 19, 1893, the details of which it will be unnecessary to go into, except to say that it called for periodic inspections of the dairy, veterinary examinations of the herd, chemical analyses and bacterial counts of the milk, besides a strict supervision over the health of the employees. Nothing was left to chance, the character and location of the lands, the buildings, the water supply, the surroundings, the housing and care of the cattle, the fodder, the collection and handling of the milk, its preparation for shipment, including its transportation and delivery were all considered. After 33 years of operation this plan remains unchanged in all of its essential features. The idea of the Medical Milk Commission originated by Dr. Coit, has spread until now there are more than 80 commissions in the United States and Canada, besides others in Europe.

The influence of Certified Milk has been exerted over the production of market milk to such an extent that there has been a great improvement in almost all milks coming into the large cities of the country, but to say that ordinary milk is as safe as Certified Milk, whether it be raw milk or pasteurized milk is compromising to one's intelligence and self-respect and is said either through ignorance, carelessness, or viciousness, and I am quite sure could not be said by any honest man who had personally seen for himself the production of milk at a Certified Milk Dairy, where the cows are under the general supervision of expert veterinarians all the time, and where they are guaranteed to be free from tuberculosis, both by the Federal Government and the State Board of Health; where the cows are curried and groomed and vacuum cleaned until they shine, all utensils scrubbed and sterilized, the stables themselves clean and free from odors, and the milkers in their freshly sterilized suits. Within a

very few minutes after leaving the cows the milk is chilled, strained, bottled and capped, by machinery, crated and iced and kept iced until delivered at the customer's door. This is Certified Milk, a clean, pure, raw, natural milk, just as it comes from healthy cows, unchanged by any process which might deprive it of its enzymes and vitamins.

Certified Milk is the only raw milk that should be used in large cities, according to the late Dr. L. Emmett Holt, and is the only raw milk permitted to be sold in New York City. All other milks must be pasteurized, and sad to relate, pasteurization has fallen short of many of its claims. Dr. William H. Park, bacteriologist for the New York City Board of Health, says that his inspectors have found some pasteurizing machines so fixed that milk which went in on one side came out on the other side exactly as it went in. Our own State Board of Health recently inspected 42 pasteurizing plants and found that only 2 of that number held the milk at 142° F., for 30 minutes, which the Department of Agriculture of the United States Government says is necessary for proper pasteurization, and that in 18 of these machines the milk came through in 3 minutes, and in 12 others came through in 6 minutes.

Czerney and Keller, in their book on Infant Feeding, state: "We have become skeptic since we began the investigations of artificial feeding. Vitamines and accessory food products have taught us that there are necessary peculiarities in food products which have, up to the present time, been unknown and have as yet not been satisfactorily explained. We reject the industrial pasteurization, the chief purpose of which is to preserve the milk a longer time. We are not in favor of a sterilized or pasteurized infants' milk because the milk when prepared at home for the infant, is generally warmed again. We demand for the feeding of infants an unchanged, raw milk, free from disease, and low in bacterial count."

Although in some places an excellent quality of Grade A raw milk is produced

by individual effort, it is manifestly impossible to exercise the strict supervision over its production in quantity, which is necessary to assure a uniformly, safe, raw milk. For one thing it is extremely difficult to get the ordinary dairy employee to submit to the taking of cultures of the throat and nose, examination of the blood and stools, for typhoid, and the strict physical examination of each individual on the dairy premises, so as to eliminate as far as is humanly possible the spreading of disease in epidemic form wherever contaminated milk is distributed. That this is a real danger is borne out by many observers, of whom I will quote only Buensey and Koeber, who summarized the epidemics compiled by them as follows: In 138 epidemics of typhoid traceable to a specific pollution of the milk, the main facts are as follows: In 109 instances the disease prevailed at the farm or dairy. In 54 epidemics, the germs reached the milk through the water with which the utensils were washed, and in 13 of these instances it was admitted that the milk was intentionally diluted with polluted water. In 6 cases the infection was attributed to the cows wading in the drinking polluted water. In 3 instances the infection was spread by ice-cream prepared in infected premises. In 21 cases the employees, in addition to milking the cows were taking care of typhoid cases at the same time. In 6 instances employees continued at work during the first week or 10 days of their illness.

These same men tabulated 74 epidemics of scarlet fever and 28 epidemics of diph-

theria spread through contaminated milk.

Just last week, Dr. McEwen, Secretary of the Essex County Medical Milk Commission, called my attention to a statement in a recent State Board of Health Bulletin, attributing an epidemic of typhoid, in a neighboring town, to a dairy which was at the same time delivering Grade A raw milk to Newark.

Dr. William H. Park stated a short time ago that as far as he was aware no epidemic of any kind had as yet been traced to genuine Certified Milk.

Since Dr. Coit first originated Certified Milk, the mortality from enteric diseases, tuberculosis, typhoid, scarlet, diphtheria have all dropped to an almost unbelievable extent and while much credit must be given to the more careful supervision of market milk at the present time, and to the insistence upon pasteurization of all milk which does not meet the more stringent requirements of present day methods, yet after all it was the origination of Certified Milk that started the crusade for better and safer milk and it should be a matter of tremendous pride to us, as medical men, that to a member not only of our profession but of our own Essex County Medical Society, goes the honor of first producing a milk that was uniform in composition, low in bacterial count, clean and safe.

It is quite impossible ever to estimate the value to humanity in the improvement of health and in lives saved by the wonderful contribution of Henry L. Coit to preventive medicine.

#### THE CALL TO THE OPEN.

There's a call to go out in the open  
To mountains and valleys and pines;  
I'm sick of four walls, and I'm hopin'  
To be where the sun really shines,  
To go where the blue's in the heavens,  
Sweet waters in river and rill;  
Till the ache leaves my heart which it leavens,  
And I quaff all outdoors to the fill.

I want to feel real air around me,  
To breath of spiced balsam and fir,  
And, freed from the confines that bound me,  
To clear my tired eyes of life's blur.

I thirst for the peace of the valleys,  
I pine for the verdure clad hills;  
The harp in the tree tops still dallies  
To lure a sick mind from its ills.

The smell of the wood fire at morning,  
The drone of the night winds at eve,  
The vault with its star gems adorning  
Bring balm as a blessed reprieve,  
I would hold soul speech with the mountains,  
And walk where shy, wild, deer have trod,  
To find youth again in cool fountains  
And joy again in the glories of God.

—National Glass Budget.



# JOURNAL OF THE MEDICAL SOCIETY OF NEW JERSEY

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Each member of the State Society is entitled to receive a copy of the JOURNAL every month. Any member failing to receive the paper will confer a favor by notifying the Chairman of the Publication Committee of the fact.

NOTE.—The transaction of business will be expedited, and prompt attention secured if,—

All papers, news items, reports for publication and any matters of medical or scientific interest, are sent direct to THE EDITOR, Atlantic City, N. J.

All communications relating to reprints, subscriptions, extra copies of the JOURNAL, books for review, advertisements, or any matter pertaining to the business management of the JOURNAL are sent direct to THE CHAIRMAN OF THE PUBLICATION COMMITTEE, (address above), Newark, N. J.

## INFORM YOUR CONGRESSMAN.

In our department of National Medical News you will find a report concerning one piece of pending legislation which calls for your immediate consideration because it may come to vitally effect your practice. But, this is not the only legislative matter demanding similar attention. Congress will reconvene about the time this copy of the Journal reaches your desk, and the following bills affecting the medical profession are already upon the calendar of the Senate or the House of Representatives:

(1) The Harrison Narcotic Act. This Bill not only threatens interference with your professional judgment in the employment of narcotics, and refusal of registration upon an unsupported and unproved charge of misconduct, if made by a revenue officer, but, *subjects your professional conduct to the scrutiny and judicial decision of any pharmacist.* In the House of Representatives this measure is known as H. R. 11612; in the Senate it is S. 4085. The former is now in the House Committee of Ways and Means, and New Jersey is represented on that committee by the Honorable Isaac Bacharach. It is advisable that you should write to Mr. Bacharach at once demanding the defeat of this proposed legislation, and that you should at the same time send a copy of that letter to the congressional representative from your own district and to both Senators, Edwards and Edge.

(2) Sheppard-Towner Act. H. R. 7555, designed to prolong the life of this law, and S. 2696, an original Senate Bill of the same

import, are now in committee and the first named has received a favorable report. The American Medical Association has consistently opposed the Sheppard-Towner Act and the principles underlying such legislation, and our own State Society expressed opposition to this proposed extension of the law at its last Annual Meeting. Another Bill, H. R. 10986, introduced in the House, April 6, 1926, provides for an outright repeal of the Sheppard-Towner Act. Enactment of this last Bill should be urged by the profession.

You are requested to write to your congressional representative, and to both Senators, urging the defeat of the 2 first named Bills and adoption of the repealer.

(3) Federal Lye Legislation. S. 2320 is an Act to safeguard the distribution and sale of certain dangerous caustic or corrosive acids, alkalis, and other substances in interstate and foreign commerce. It requires household packages of lye and other caustic substances to be labelled so as to give notice of the inherent danger of their contents. When writing to your congressman in protest about the Narcotic and Sheppard-Towner Acts, take occasion to express your approval of this Bill to safeguard the public against mishandling of dangerous caustics.

The Editor has, in the name of the State Society, addressed each member of Congress from New Jersey and each of our Senators, regarding these several Bills, but your personal message to your own representative will prove more effective as coming from one of his own constituents.

## MILK MUST BE SAFEGUARDED.

Milk is one of the most valuable of foods. McCollum urges that every child be given a quart of milk a day, and Emerson suggests that adults drink at least half that amount. As the average consumption of milk is about 0.8 pint per capita, the need for greater educational efforts on the part of both practicing physicians and health officials is evident if the optimum consumption of milk is to be realized. But what kind of milk? Certainly not "any old kind", for milk is an excellent culture medium for bacteria, and when it is produced and handled carelessly contamination is almost inevitable.

The ideal milk would be that produced by clean cows known always to be free from disease, housed in clean stables, and milked by clean attendants also known to be continuously free from disease. Obviously such perfection cannot be attained. The nearest approach to it is certified milk, produced under the supervision of the medical milk commissions; for the cows are subjected to periodic inspection of veterinarians and the milkers to medical examination. Yet the possibility of disease contamination cannot be excluded entirely.

The next best thing to this ideal, which cannot be attained, is pasteurized milk. In New Jersey, pasteurized milk is milk heated to a temperature of 142°-145° F. for a period of half an hour and then cooled immediately to 50°. The pasteurizing plants of the State are subject to constant supervision by the State Department of Health and are checked to see that the proper temperature and holding periods are maintained. Clean, fresh milk that is subjected to this process is *safe* milk, for pathogenic bacteria cannot survive this treatment although the souring organisms can.

If these are the facts, we should expect that cities would enact milk ordinances under the authority of the State law which would provide for the sale only of certified and pasteurized milk, but as a matter of fact only a few municipalities do this. Many neglect to enact any ordinances, relying upon State laws and the State Health Department for protection. Others have enacted complicated ordinances providing for various grades of pasteurized and raw milk, indicated by mysterious

and largely meaningless symbols, and in some instances based upon practically unenforceable requirements.

Some of the reasons for this confusion are the desire of milk distributors to have higher grades of milk for which a premium may be asked because of some fancied superiority; the initial cost of constructing pasteurizing plants; and the still far too prevalent popular belief that pasteurized milk is inferior to raw milk. The solution of the problem is nine parts education and one part legislation. The general practitioner, the pediatrician, and the health officer have all a definite responsibility to teach each person whose opinion they may influence to appreciate the value of milk as a food, and the necessity for obtaining only safe milk.

Every intelligent citizen in New Jersey should know that certified milk is raw milk made as nearly safe as strict rules will make it, and that pasteurized milk is safe, wholesome, and nutritious. When the public generally realizes these facts and refuses to use raw milk that is not safe, the enactment and enforcement of adequate milk ordinances will be without administrative difficulties. Not until then can a "quart of milk a day" be advocated without many stultifying qualifications.

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## MEDICAL BOOK REVIEWS.

Actuated by a desire to provide our readers with more useful and timely information regarding new medical books, we are attempting a departure from the usual manner of presenting our book reviews, and beginning with this issue will set up a new department in the Journal. The leading publishers have promised to help the project and it is our intention to pursue the following plan.

Periodically, at least twice, perhaps four times, during the year we shall publish a list of the newest medical books, and indicate the publisher's opinion of their value. Monthly, we shall publish brief "reviews" of these books by members of our own society; the fundamental object of such reports being to give the prospective purchaser and reader sufficient information to enable him to determine whether he needs or desires the book as an addition to his working library.



Dr. Royce Paddock, of Newark, has kindly consented to take charge of this department of the Journal, and we feel confident that through him we shall obtain honest, intelligent, information about each new book. He is not bound by any obligation to the publishing houses and has full liberty to praise or criticize a work as he sees fit. Where the subject is one of technical scientific character outside his own knowledge or experience, he will call upon other members for aid in the reviewing, but his personal supervision will be given to the whole. We count ourselves fortunate in obtaining his assistance in this work.

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### AN ARISTOCRACY OF MIND.

*(Reprinted from the Kalends)*

The possession of wealth, along with pride of birth, as a criterion for determining the value of an individual's life, is rapidly being thrown into the discard of things obsolete. Likewise is fast disappearing the belief that this life is a "vale of tears" wherein one should rigidly follow certain rules and regulations in order to merit eternal bliss and achieve joy supreme. Rather there is slowly, but none the less surely, being given recognition to the truth that the good of all, present and future, is the chief concern of life.

Look back on the ages and learn from the history of science from whence we came and whither we have arrived. Compare the past with the present and the potentialities of the future, and it is impossible to avoid a certain and wholesome respect for human beings. Is it not due to the contents of the little skull pans of worth while human beings that we are not now living as did our ancestors of tens of thousands of years ago? The human brain is the primal, and yet remains, the source of all that man has accomplished—the most marvelous mechanism in Nature's vast laboratory.

Consider what the minds of men have wrought within the last one hundred years: Stevenson on land, Fulton on the water, and the Wright brothers in the air effected revolutions in the lives of mankind such as the world had never experienced. Morse on the land, Field through the water, and Marconi overcoming the resistance of earth, sky, and sea,

have brought into contact the utmost parts of the earth, and have made possible the dissemination of knowledge wherever man is found. Wells, Morton, and Long with anesthesia provided a List with the means by which the possibilities of antisepsis could be demonstrated, and thus pointed the way to the marvels of modern surgery. Pasteur by his discovery of bacteria, Banting with insulin, Abel with adrenalin, and hundreds of others, have brought relief from pain and suffering to millions of their fellows.

Who of intelligence would be so foolish as to attempt to compare the value of such achievements with the hoarding of the unspeakably filthy counters of commerce or the few ephemeral years of political pomp and circumstance? Truly have "The boast of healdry, the pomp of power, and all . . . that wealth e'er gave" yielding their palms to an aristocracy of mind, whose princes have their thrones in the laboratories of science, whose mottoes are Progress, Human Welfare, and Intellectual Freedom, and whose final and inevitable victory will mean the overthrow of the forces of ignorance, superstition, intolerance, bigotry, and greed.

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### DEPARTMENT OF ETHICS.

We are pleased to report that one of our members has consented to contribute a monthly article on "Medical Ethics". As stated in the July Journal, when discussing the present lack of collegiate teaching concerning this subject, we have long been searching for some one capable of conducting a systematic course of instruction and able to give the necessary time to regular periodic presentation of the principles of this delicate department of medical practice. At last our efforts have been rewarded.

Dr. John Hammond Bradshaw, who scarcely needs an introduction to any member of the Medical Society of New Jersey, and whose accounts of hospital visitations have been so entertaining and instructive, has accepted our invitation to conduct this department of the Journal.

He is one of the recognized leaders among

the medical men of this state; ethical in his own personal and professional conduct; old enough to have learned by experience and observation the temptations and difficulties that beset the practitioners and which only ethical conduct can overcome; and yet young enough to retain that cheerful and optimistic attitude toward life that justifies one in a willingness to counsel and advise his associates.

It is not intended to make these articles a series of "preachments". Sermonizing is none too popular today, upon any subject. It is meant only to indicate the pitfalls and snares in the road of the unwary professional man, to show how and why ethical conduct is an essential element in the truly successful practice of medicine, and to suggest remembrance at all times of those principles that may guide one safely through danger zones. We are sure you will find these monthly articles both interesting and profitable reading.

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#### GOVERNMENT CONTROL OF PRESCRIBING.

Just as we are going to press comes announcement of the United States Supreme Court's decision sustaining the limitations placed on whisky prescribing by physicians. By a vote of 5 to 4, the ruling of the Prohibition Unit—that a physician may not prescribe more than 1 pint of spirituous liquor to any patient within any given 10 day period—is upheld. Justices Holmes, Brandeis, Van Devanter and Sanford supported this contention; Justices Sutherland, McReynolds, Butler and Stone dissented; Chief Justice Taft, apparently, cast the deciding vote.

Speaking editorially of this decision, the New York Evening Post, November 30, says: "Of all the unpredictable consequences of the prohibition amendment and the Volstead act, the attitude of the Supreme Court has proven the least predictable.

The Court has uniformly upheld the act in ramifications which even the stoutest prohibitionist would not have claimed at is inception. Search and seizure, double jeopardy, liquor on American boats—all these points

have given the Court occasion to extend the prohibitory powers in a way that has been little short of amazing. It is the more so when one remembers that no written opinion was ever handed down in the overruling of Mr. Elihu Root's argument on the fundamental theories at issue.

In its latest decision the Court follows its established course. Dr. Samuel W. Lambert, of New York, in 1922 sought an injunction to determine whether the Government had the right, under the Volstead law, to limit the quantity of whisky which may be prescribed for patients by physicians. He maintained through the lower courts up to the highest tribunal that it is his professional right and duty toward his patients to treat their disease according to his best skill and judgment, and, to that end, to advise the use of such medicine as is best calculated to effect a cure. In this fight for principle Dr. Lambert was formally backed by the American Medical Association.

The Supreme Court now refuses to admit this right of a physician. It does so on the ground that limitation of the amount of liquor which may be prescribed for medical purposes is a provision adopted to promote the purposes of the Eighteenth Amendment. This has been the standard which the Court has held in primary review in previous rulings that seemed to clash with established rights.

The country must accept the verdict, of course. And it may take from it the thought that whatever the prohibitionists may say they can not deny that the Supreme Court has stood consistently by them in upholding a full and free test of this great experiment. But that large body of middle opinion which is gradually forming may well ask itself whether it approves of the Federal Government's going into the profession of deciding upon the proper limitations for prescriptions to the sick."

The last clause of the above quotation is worthy of profound consideration. If the national government may say when and how and how much whisky we may prescribe for a sick person, may it not soon arrogate to itself the determination of when and in what amounts we may use quinin or any other remedial drug?



## Medical Ethics

John Hammond Bradshaw, M.D., F.A.C.S.

### STOCK INVESTMENT.

Do we ever take stock? Do we know just how much we are worth? I do not mean how much money we possess or how much land we have got or how many high-priced automobiles we own. We can have an abundance of material wealth, but yet be poor indeed. Our lives cover too short a span for us to afford to give or allow too much time and attention to these things. Of course we must acquire enough of this world's goods to be fairly independent. If we do not have enough material wealth to satisfy our material wants, we are at a disadvantage and we are handicapped—we cannot do the things that are really worth while and that give us true satisfaction. But it is not our moneys that give us the best satisfaction. It is sad to reflect how many of us are obliged to waste the best years of our lives in the effort to accumulate mere goods. Is the man who has scooped up the biggest pile the most successful? Does he stand out as the happiest among his fellows? What constitutes success? This question was asked William Osler. He gave one of his wise, almost cryptic, replies: "Some think it is getting what you want and being contented with it". Stop a moment and think how comprehensive is this answer from one of the world's most successful physicians. Getting what you want is not sufficient for happiness. Yet we often say to ourselves—If we can only get just so much money; if we can build up our practice to such and such an extent; if we pitch our tent in the places we desire; if we can become a leader (and an object of envy) among our set; if we can have our offices filled with the wealthy and (with display) can show ourselves superior to Dr. Snob; and if we can afford ourselves a trip when we wish to Palm Beach or Europe—then surely we will be happy, and we shall be considered among the most successful of men. Do these things satisfy? Answer, those of you who have them!

But Osler's reply mentions *contentment*. We must strive to attain those things that give contentment. Now let us ask ourselves what are those things.

First of all, we must have health. It is true that there have lived those rare spirits who, handicapped by deformity or illness, have made a success of their lives. They are uncommon. We should therefore, if

we wish to be a success, let nothing, absolutely nothing, interfere with our health, our most precious possession. Of what use would a million dollars be to us if we knew we were dying? (And many have begun to die many, many years ago.) We could give our wealth away in this case; but as far as we ourselves are concerned, we would be out of the race. It is often a shock to us to see youth burn up its health. One often sees a young man spend his health as if he had an unlimited supply of that most precious and limited of possessions. Later on in life, when the grind and treadmill of existence overwhelms him, his health is forgotten and often suffers cruel neglect. Doctors are far from immune from the reproach of neglecting their own health. True, they are too busy looking after the health of others to look after themselves. This is a lame excuse. To this the wrecked lives and early deaths of many doctors can testify. We see our most brilliant confrères extremely stupid in this respect. You cannot be a success if you are dead! (That is, from your our point of view.) You can leave money or a memory of a successful life. But would not that life be more successful and beneficial if it had been extended? We all know of many instances where if a doctor had bestowed one-tenth the attention he gave to others on his own health, he would still be alive and still giving the world the benefits of his incomparable experience. So, therefore, we cannot have true contentment if we know our own basic metabolism is at fault.

Besides our health, there are other things than wealth that give a contented spirit. It sounds trite to make the statement (but it is one of the world's great truths, just the same) that as Poor Richard put it, "Be good if you would be happy". How many doctors have gone on the rocks? Not many, thank God! You and I can, nevertheless, recall instances where a most brilliant and enviable "prospect" has been forever blasted and lost not only by the intemperance of the stomach but also by the letting down of the other bars of moral restraint.

If we get what we want and do not know how to use it, we again fail to attain to that contentment that Osler calls the *sine qua non* of true success.

If we lead a self centralized existence (and are regardless of the rights of our fellowmen), we will find our stock is getting low and we will fail to attain success. If we are so satisfied with our own attainments that we are not constantly reaching out after more and more accomplishment,

and especially if we allow ourselves to contract progeria, or premature senility, we are surely and sadly slipping. For *it is our own fault if we grow old too soon!*

Our stock-taking, therefore, should show there is a higher life attainable by us all, higher than the acquisition of material wealth (necessary and agreeable as that is); that our true contentment and joy in life depends not upon our cash alone but on the health and wealth of the spirit that enables us to work, not for ourselves so much as for others. What we are worth, therefore, is not what we can count in a cubby-hole, but whether we are able to add a contribution to the knowledge, the welfare, the joy, the contentment, and the true happiness of man.

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## Esthetics

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### SEMI-PROFESSIONAL READING.

So many interesting books are appearing these days that one can scarcely keep pace with the progress of literary events without neglecting his avocations other than reading, to say nothing of finding time to devote to his proper vocation. The busy physician has perhaps greater difficulty than other professional workers in selecting his general reading matter, because the space between his scientific books and the lighter imaginative and more entertaining literature is a sort of No Man's Land occupied by a class of books dealing with the public generalized aspects of his professional problems. It is essential that he should read and become familiar with these semiprofessional presentations of medical subjects, because they represent the source of that medical knowledge attained by the more intelligent members of his professional clientele.

In the crossing of this boundary line territory, recently, we met with 2 publications that seem worthy of introduction to those of our readers who may not have had time to browse in that direction since the return from vacation.

In "The Doctor Looks at Love and Life", Dr. Joseph Collins, one of our most esteemed contemporary neurologists, has given us another of his excellent and praiseworthy literary contributions; excellent in its literary style and character; praiseworthy because it deals honestly, sanely and instructively with some of the most important problems of the age. The existence and serious nature of these problems is generally recognized. Parents, teachers, and preachers shake their heads and drop their hands before the "younger generation" problem; or widely proclaim the need

for corrective measures and prohibitive laws, which every thinking persons knows would not be productive of the results desired. Cities, states and nation are aghast before the ever-growing "crime" problem, the disrespect for all law and the disregard of most of the principles upon which this nation was founded; various remedies, all more or less futile in character, are suggested but very little effort seems to be made toward ascertaining the cause of the existing sad state of affairs.

Dr. Collins, with the instinct of the true physician, attacks both problems by searching for the cause of the recognized facts. With reference to the national decadent tendencies, he diagnoses the condition as one of "adult infantilism", and we think he very well proves his case. Many factors bearing upon the etiology are discussed and some consideration is given to treatment, but the condition is recognized as one full of complications and the patient is likely to be ill for a long time before complete recovery can be expected.

Dealing with the question of love, Dr. Collins shows himself not only to be a master of medical science but a sympathetic, understanding humanitarian. In the matter of sex education, we have all realized the importance of instructing the young people, and that such instruction, generally speaking, should be given through the parents; but how few reliable, authoritative books or essays have there been that we could recommend to parents for their own edification so that they might be prepared to teach their children. The author may not, in this instance, have meant his book to be used for that purpose but we feel that it meets the situation fairly well, and certainly better than most of the other books which we have happened to see.

Read this book, by all means; you will enjoy it; you will profit by it; you will almost surely want to pass it on, or at least recommend it to a number of your friends and patients.

Paul DeKruif, introducing the reading world to "Microbe Hunters", has produced much the best piece of literary work we have as yet observed from his pen. If you are fond of romance, if you care at all for biography, you will enjoy his sketches of the most famous bacteriologists, some of the greatest adventurers, explorers and discoverers the world has ever known. Intimate details of the lives of Pasteur, Koch, Roux, Behring, Theobald Smith, Metchnikoff, David Bruce and Ronald Ross, are entertainingly presented and the reader is made to feel the suspense and the thrills of victory as each of these great men passes through the critical period of his greatest discovery. Fascinating as each of the above mentioned stories may be, however, the



American physician will probably get his greatest kick, indeed his longest series of thrills, when reading the account of the work of the Yellow Fever Commission headed by Walter Reed. This masterful leader, with his able assistants, Carroll, Lazear and Agramonte, and the American private soldiers, who so nobly volunteered for service and submitted themselves to the most deadly risk conceivable, constitute a band of heroic figures the like of which can scarcely be duplicated in all history. No physicians can read this story without a feeling of pride that he is permitted to belong to the same profession which these men adorn.

## Medical Economics

The Editor has on more than one occasion maintained that, contrary to a generally accepted opinion, doctors are good business men. It was, therefore, with a feeling of distinct joy that he read some months ago an article (Bulletin of the Medical Society of Kings' County, Brooklyn, New York, April, 1926) supporting his contention. Under the sobriquet of "Quaestor", a member of that medical society offered his confrères, especially the younger members of his profession, some sage advice, and we are taking the liberty of republishing, for the benefit of our members, the applicable portion of his contribution.

### THE IMPERATIVE AVOCATION.

"Physicians have long been considered to be poor business men. The banker sadly smiles, the realtor laughs, the broker and promoter gloat when our financial follies are the subjects of remark. The reasons for our shortcomings in this province are immediately evident to any thinking man. The field of our chosen work is so extensive, the mastery of general or special subjects so difficult and time-consuming, the patient daily doing of every professional duty that presents itself so absorbing that the study of the dollar seems as elementary and uninteresting as the first reader in primary school to a professor of philosophy. Moreover most physicians have such a keen sense of responsibility that when the safety of a life, the preservation of a family, or the solidarity of a home are involved in their work, money becomes a secondary consideration.

Nevertheless money must be paid for the necessities of life, for a roof to cover the family, for supplies, equipment, transportation and the opportunities to extend scientific knowledge and skill. Therefore the physician must recognize that he is perforce involved in the economics of the world and the problems thus presented should be faced with the same qual-

ity of effort and the same grade of mental acumen with which he makes diagnoses and plans treatment. We once heard a successful business man say that he always wanted a Doctor of such a character that he could have made a success in some other business. We told him that he would be astonished if he could realize how large a percentage could qualify. He doubted our figures "because most of them die poor and never have any money for a good cause."

The indictment of the business man is unquestionably justly found. Undoubtedly the lack of standardization of fees is one cause of the economic difficulties of Doctors—but this can hardly be corrected unless we adopt the high-handed heartless method of certain of the labor organizations—which is unthinkable. This lack of standardization has unfortunately led to the "cut-throat" type of competition in some communities and this is a trying element in the problem of the physician so located. But our lack is largely based upon the fact that we do not, as a group, concentrate even a few minutes per day upon the consideration of finance, a matter that should be easily mastered by minds so capable in elaborate scientific study. For, after all, our fiscal affairs are simple as compared with those of large business organizations.

The important step in this regard should be taken by the youngest practitioner at the beginning of his work. This step should be the adoption of *some definite system of business conduct* which can be developed, enlarged, and elaborated as his work grows. We started as ignorant and innocent of finance as any one of our brethren with no means but that to be furnished by our work and with no well proportioned sense of values. In over 25 years we have learned much. We were early, healthily if not gently, prodded by some good friends in the business world and so we have come to think a very little every week, if not every day, of the business side of a doctor's life.

A good simple method of book-keeping is essential—one that will be legible and understandable to anyone to whom we may care to show the ledger page—even to the patient. Charges should be standardized as far as is just to those in restricted circumstances or temporary misfortune. The ledger should be constantly kept up to date. An itemized statement of charges is usually appreciated and reduces time wasted in explanation. A monthly statement, rendered promptly on the first of each month, appeals to the business sense of most people. Small bills are often quickly paid where large ones cannot so readily be managed by the salaried man or woman. It is reasonable to demand cash payment for all

office work—as is the custom of many doctors. Some consider that it is just and good business to carry only such accounts on the books as can furnish good business references. Some of us feel that a proper protective measure would be the establishment of a credit bureau at the Medical Society offices and we trust that this may be an early development.

When the income begins to appear there should be some system ready to proportion its uses. The basic principle here should be "Fixed charge well within the income." Another "Buy nothing, except a desirable residence, until the money is in the bank against which a check may be written." (Every Doctor should own his home free and clear of mortgage.) The best fiscal method of course, is to "budget" the expenses, always having as a leading item that of *savings*. One suggestion is that the first fifty or hundred or two hundred collected each month goes to the savings bank or to a savings account in a Trust Company. It is difficult for us to save one-third or one-half of our income as some business men do—for our income is gross and our professional as well as our domestic expenses must be subtracted from it. But *something* can and should be saved each month or at least each quarter—and we should live contentedly on the balance—saving more if we can.

When the savings account reaches \$2000, one-half of this should be carefully and safely invested in a guaranteed mortgage, a high class bond, or a high class stock with a long dividend record and ample current earnings. A good plan is to divide our surplus equally among these 3 classes of investment until we begin to age, then sell all of the stock (when the market is high), and invest only in mortgage and high class bonds. *None* of the income from these investments *should ever be spent* except for reinvestment. In case of long illness we may borrow from this income account but always repay it after recovery. *But* we should have ample health and accident insurance to prevent such needs.

Opinions regarding life insurance differ—but it is safe to say that most married doctors need it during the early years. It is not good investment but is good business until the savings and investment account renders financial independence certain. We should not list life insurance policies as assets until their terms of payment are completed and then only their cash value. They are liabilities so long as we must pay.

The budget should have set aside a certain percentage (say 10%) for new books and equipment.

If some systematic plan of finance is thus adopted every healthy doctor should secure

financial independence before he is 50 years old. We failed to do this because our fixed charges were too high early and were hard to prune as time passed and the demands of the work grew. Also we speculated a little in dangerous stocks and lost the savings of a year or so. We hope our expressions and suggestions may be helpful reading to some of our younger friends.

Our real desire at this moment is to plead for systematic management of the Doctor's business, the little "side-line" that he must "take on" or get lost in the world. We think this can be made easier for him if he interests himself in some non-medical organization with an object of community betterment. Here we discuss a common interest with business men. We should be good citizens as well as good doctors."

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## In Lighter Vein

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### Major Operation.

"Jack writes from college that he hopes to be matriculated soon," said the fond mother.

"Gracious!" exclaimed Mrs. Botts. "I hope he comes out of the ether easier than I did when I had my last operation."—(Life)

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### Urgent!

"Do I really need brushing off?" asked the passenger in the Pullman.

"Does you?" exclaimed the porter with great emphasis. "Boss, Ah's broke."—(Am. Leg Weekly)

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### What Next.

Barnum—That fellow over there has made a fortune out of turpentine.

Bailey—Good heavens! Are they even drinking that now?

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### Criticism.

Two men in London were discussing a certain novelist. "She's a wonderful writer", said one. "Yes", replied the other; "the mystery to me is where she gets her marvelous lack of knowledge of life".—(Boston Transcript)

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### What They Do in Pittsburgh.

He was picked up unconscious and taken to the meat market near by.—(Pittsburgh Chronicle-Telegraph.)

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### A Sporting Chance.

Mother—"Where has Owen gone?"

Father—"Well, if the ice is as strong as he thinks it is, he has gone skating—if not, he has gone swimming!"—The Passing Show (London).

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### A New Version.

Mary had a little lamb,

With green peas on the side.

The check, it came to sixty cents,

And Mary nearly died.



## County Medical Surveys

### MEDICAL SURVEY OF BURLINGTON COUNTY.

DANIEL F. REMER, M.D.,  
Mount Holly, New Jersey.

When we consider that Burlington County was settled as early as 1600, we realize that it is hard now to get much of its early medical history. The total population of the county has reached about 86,000 only, and there are many square miles of uninhabited land. The earlier settlers were along the shores of the Delaware River, where they sought freedom and safety. It was here, near "Bordentown on the Delaware", that the exiled Bonaparte family, of France, found refuge and built a beautiful place which was later used by Prince Murat, an Ex-King of Spain. Underground passages connected the river edge with the mansion on the bluff.

Among the earliest doctors of record were



John Wills and John Gosling, both graduates of English medical schools, who practiced in Burlington City as early as 1677. Burlington had become quite a town by this time, having been founded in 1652. Other settlements appeared inland from the Delaware on navigable smaller streams. On the head water of the Rancocas was located at Bridgetown, later called Mount Holly. In this village there appeared Dr. Robert Dimsdale in 1683, also a graduate of an English school. These men practiced amid great hardships. Several tribes of Indians inhabited different inland locations and were not too friendly. Tuckerton, almost on the Atlantic coast, had also been settled very early for in 1745 there appeared in that town a Dr. John Baker.

Burlington City, Bordentown and Mount Holly (then known as Bridgetown) were the

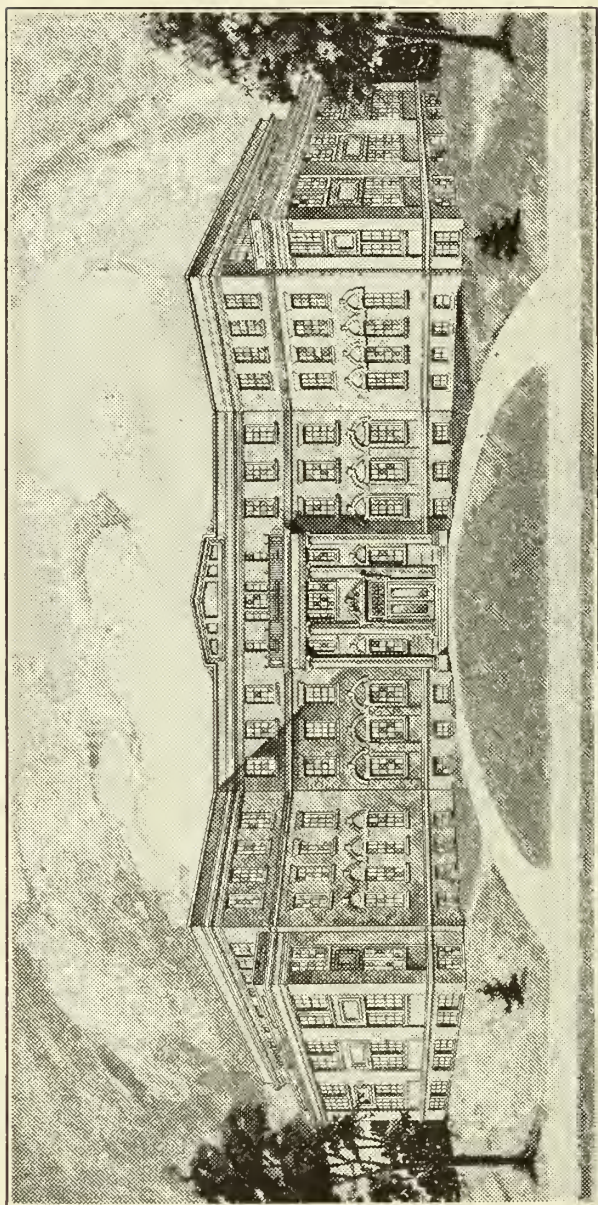
earliest settlements. Dr. Stacy Budd began practicing medicine in Mount Holly in 1755 and educated a son, Benjamin Say Budd, in England, who succeeded his father in 1785. Since that time there have been a succession of "Budds", lawyers, educators, legislators and men of prominence in the affairs of the county.

These men had to be educated abroad, the first American medical school being the University of Pennsylvania, in Philadelphia, founded by John Morgan in 1765. Next came the founding of the New Jersey State Medical Society, in 1766, and as the University of Pennsylvania began to graduate physicians the medical field in New Jersey began to fill.

Moorestown was founded about 1770 and Dr. John Stokes, a Friend, began practice there in 1786. He has been succeeded by sons and grandsons so that Moorestown has had one of his kin in practice steadily to the present time.

Dr. Edward Shippen, who became famous in Philadelphia, was originally a physician of Burlington, in 1795. New Jersey was becoming more thickly settled now, the Dutch coming in from the North and the Friends invading the southern part of the state. Agriculture being the main occupation, Burlington County did not grow very rapidly.

The law regulating the "Practice of Physic and Surgery in New Jersey", in 1800, required that a license should be obtained from the State Medical Society, whether the applicants had diplomas from medical schools or not, and imposed a penalty of \$25 for every prescription given by a nonlicentiate; and unless such license was properly recorded, either in the office of the County Clerk or the Chief Justice of the state, no fee could be legally demanded for professional services. The year previous to organization of the Burlington County Medical Society (1828), an incident occurred which demonstrated the efficiency of this law, and led to union of the few physicians then in the county, for their own protection. The scene was laid in the little town of Columbus, at that time known as Black Horse. The parties immediately concerned were Dr. Asabel Page, then a practicing physician of Columbus, and Prince Murat, a relative of Joseph Bonaparte, then residing as Ex-King of Spain at his beautiful seat in Bordentown. The Prince and the doctor were both fond of horses, and each kept several in training for racing. They were to have a race through the street of Columbus; which had been well advertised. The prize for the victor was to



THE PROPOSED NEW HOSPITAL TO BE ERRECTED AT MT. HOLLY, NEW JERSEY.



be the losing horse. The Prince and the doctor appeared and the race was run in the presence of a large crowd. The Prince was the winner and demanded his prize. The doctor claimed a foul and refused to surrender his steed. The Prince was very angry, and declared that he would not pay the doctor his bill for professional services previously rendered. Suit was brought by the doctor to recover the amount of his bill. The case was tried, and the doctor was non-suited, the evidence in the trial showing that, though the doctor had passed an examination and had received a license, he had neglected to comply with the law which required the filing of his certificate in the office of the Chief Justice of the state; hence the loss of the case. The story of this horse race and trial created considerable excitement throughout the county, and the discovery was made that there were but few authorized medical men in the county.

Accordingly, in 1829, the District Medical Society of Burlington County, was formed with 5 members; Drs. Nathan Cole, John L. Stratton, Charles Ellis, John C. Davis and Benjamin Stratton. The state granted this society authority and the society was legally formed on May 12, 1829. The society grew by 10 men in 1830, 3 more in 1833, 2 in 1836, and the membership gradually increased until in 1850 there were 25 members.

During the early history of medicine in Burlington we find a number of medical men interested in public affairs: Dr. Thomas Page, of Burlington, was a member of the Assembly of 1834. Dr. Lewis L. Sharp, of Medford, served in the Assembly of 1890-1891. He was not only a good physician, but a brilliant thinker as well. Dr. Sharp could converse in French and German, the result of years of study of these languages, and his library was one of the best to be found in the country. Dr. John W. C. Evans was a member of the Assembly in 1845-47-48, and was Speaker of the House in 1847-48. Dr. William C. Parry, of Hainesport, was a member of the Senate in 1895-98.

The first medical institution to be chartered in the county was the Burlington County Hospital, at Mount Holly, in 1880; mainly by the efforts of Francis Ashburt, of Mount Holly. This institution has served the people of the county faithfully and well, and, as demands have increased, extra space has been added until at the present time the institution will accommodate 35 patients. It is continuously crowded, so much so that the Board of Managers and the Board of Council launched a

drive in June of this year for a new hospital, and in 10 days of intensive work, \$450,000 was secured for the erection of a new 100 bed modern hospital to replace the old one.

In 1890, the County Board of Freeholders built an institution at New Lisbon for the treatment and care of the insane. This institution now has about 200 inmates and a new wing is in course of construction. In 1917, the county built its first institution for the treatment and care of chronic tuberculosis at New Lisbon. The institution accommodated about 25 patients but has been enlarged until it will in a short time accommodate 100 patients.

There is also a small hospital at Riverside, the gift of Zurbugg, the "Watch Case King", who, in his will, endowed this institution. It has 11 beds.

At Brown's Mills there is a tuberculosis institution owned and operated by the Deborah Jewish Sanatorium Association of New York. The institution accommodates about 50 patients and being located in the pine belt is considered our best private institution.

Dr. Emma Weeks Metzer, of Riverside, has opened an obstetric hospital to accommodate 10 patients. This house is very well equipped and is at the service of the doctors of the county for private cases.

A long felt need has been recently realized by the opening of a private sanatorium at Vincentown, by Mr. and Mrs. Samuel Martin, for the care and treatment of the aged, neurotic, helpless and invalid cases that are so difficult to find housing for in other institutions in the county. Its capacity at present is 10 patients. It is open to the medical men of the county.

The Burlington County Medical Society, with about 40 members, embraces most all of the medical men in the county. The influence of the society is continually felt in the betterment of conditions which effect the health and growth of its population. The county society acts as a constant consultant for the Burlington County Hospital, and it has been mainly by the efforts of its members, and the courageous Board of Women Managers of this institution, together with its public spirited citizens, that the new Burlington County Hospital of 100 beds is about in process of erection. The new hospital, centrally located at Mount Holly, the county seat, will draw the medical men closer together in the future and its staff will be able to accommodate all the members of the county society in the care of their sick.

## Medical Book Reviews.

(Department Director, Royce Paddock, M.D.)

### A BIPOLAR THEORY OF LIVING PROCESSES

George W. Crile, M.D., F.A.C.S., Cleveland, Ohio.

The Macmillan Company, 1926.

The central theme of Doctor Crile's investigations for the last 26 years is presented under the above heading in the form of a somewhat extended argument, with excellent condensed summaries of the findings. In addition, general laws which bear upon and support the contention are included. Starting from a vivid incident as an intern—a view of death from traumatic shock—the author's attention has admittedly remained fixed upon the processes underlying such a catastrophe and the life processes which form the background to it.

This primal problem—the nature of living processes—Doctor Crile has attacked in many places and with many associates, looking toward knowledge enough to explain such mysteries as shock, anesthesia, the nature of sleep, and resuscitation from exhaustion. In spite of the apparent hopelessness of a real solution, in the first series of researches, those on the circulation and respiration, three important findings, now more or less familiar, were established in the face of negative findings as to the cause of shock. They were the technic of nerve blocking, the technic and value of direct transfusion of blood (artery to vein) and the lack of value of the stimulants as opposed to narcotics in conditions of fatigue and exhaustion. Out of the second series on the chemistry of blood came the worker's conviction as to the fundamental importance of the acid-alkali balance in life processes, although the cause of shock was not found in this. In the third series, the living cell was attacked and important histologic findings resulted—changes in the "stainability" of cells of many organs in many species of animals, but particularly the brain, liver, thyroid, adrenal and muscles. Here was developed the idea of the "kinetic system", an idea characterized by boldness and ingenuity, linking the above organs on the grounds of anatomic and functional changes produced in animals by fatigue and exhaustion. This view of a living being as a dynamic whole of integral structure and function gives the impression of a marked advance over the disjointed and dissected physiology which told its story part by part somewhat in the manner of the anatomy quiz class.

Doctor Crile was then led to seek in biophysics studies of the cell the true nature of the life process. The principal consideration was that the differential staining of nucleus and cytoplasm, which he interpreted as relative acidity and alkalinity on the nuclear and cytoplasmic sides of the nuclear membrane, could best be interpreted as a living electric battery, and the findings in exhaustion as that battery "run down". These researches have continued since 1917, and their findings are now presented in this book. Their essence is in the analogy between the living cell and an electric battery; an analogy which is considered an identity by Doctor Crile, and used to explain a very large range of biologic phenomena. That the theory will "point to a reasonable explanation" of the essential charac-

teristics of living being and life itself is the hope the author expresses in his opening paragraphs.

That living organisms are bipolar electric mechanisms is proposed with the hypothesis of the following mechanism: "We may therefore consider the cell as a bipolar mechanism, the nucleus being the positive element, the cytoplasm the negative element. The oxidation in the nucleus appears to be on a higher scale than the oxidation in the cytoplasm; and therefore as the electric tension increases in the nucleus, the current breaks through; the potential in the nucleus falls, and in consequence the current is interrupted. Since the potential is again immediately restored by oxidation, we conceive that an interrupted current passes continually from the positive nucleus to the negative cytoplasm, and in consequence a charge is accumulated, on the surface films." That these films between nucleus and cytoplasm are calculated to be about four millionths of a millimeter in thickness is considerable aid to the conception, since the thinner the nonconducting lipid film, the greater the electric charge that it will hold.

In the same way, the multicellular organism is conceived as a battery of larger size, in which the brain is the positive pole, and the liver the negative pole. The pathway of the current is assumed to be mainly by the partly insulated nerves, to their terminals, with a "leak" of excess electric energy through semipermeable tissues to the point of lowest potential, the liver. This rather surprising hypothesis is put forward mainly on the findings of electric conductivity in the brain and liver. In the brain excitation by emotion or adrenalin, physiologic doses of iodine or thyroid extract, or strychnin, produce increased conductivity in the stage of excitation, and diminished conductivity in the stage of fatigue. In the liver, the opposite results are found. Likewise, opposite changes in temperature occur in these organs under similar conditions of excitation and fatigue.

What the theory will explain will probably be the first thought of most of us who are not skilled enough in numbers to grapple with mathematical treatments of electric conductivity and electric capacity or to argue the propositions put forward in the chapters on the nature of cancer, the mechanism of memory, and the theory of reproductive processes. For such as we are, Chapter 7 gives an interpretation of clinical phenomena. Here, fever, anesthesia, and hyperthyroidism are treated in a very interesting and brief exposition.

In the first stage of ether anesthesia, a greatly increased production of electric energy is presumed, with a lowered resistance in the pathways which result in a general "leak" of the exciting energy to glandular and muscular terminals. This produces a general incoordinated activity, unless the subject is held or injured, when "the electric action current is led over the corresponding facilitated paths, and is concentrated on the muscles required for action". The increased secretion of the salivary and mucous glands, as well as the increased sweating, are ascribed to this increase of the exciting energy, as well as the increased blood pressure, rapid pulse (increased output of adrenalin) and increased energy output of the body. This stage is accompanied by increased "stainability" or differential staining of the nucleus and cytoplasm of the brain cells, interpreted as an increase in elec-



tric potential. The electric conductivity and temperature of the brain are likewise increased, the latter supposedly by the oxidation which underlies the increase in electric potential.

In the second, relaxed stage, physical injury causes no marked muscular response, and the electric conductivity of the brain is decreased. The temperature falls. The permeability of the cells is likewise decreased in contradistinction to the stage of excitement.

The anesthesia itself is explained as a partial break in the membranes of the synapse or nerve-switch, somewhat like that supposed to occur in sleep, with the difference that in sleep the break can be overcome by stimuli such as light and noise, (in most cases.) Nevertheless, in anesthesia the afferent impulses are supposed to reach and exhaust the brain, hence the necessity of nerve block in anesthesia. Experimental deep anesthesia proceeds with increase in the hydrogen ion concentration of the body fluids, according to Crile, until the neutral point is reached, when death occurs. Death is assumed to be caused by the loss of difference in potential between the nuclei and cytoplasm of the cells throughout the nervous system, without which difference in potential no exciting impulses can pass. After deep anesthesia, the cells of the brain, liver, and adrenals show the same changes that are seen in other cases of exhaustion. After deep ether anesthesia, then, the individual is in a "state of exhaustion, requiring a period of time for recovery about equal to that required for recovery from an equal degree of exhaustion from other causes".

In regard to hyperthyroidism, the fact that iodine increases the electric conductivity of living tissue, and increases permeability, increasing the oxidative capacity of the brain and adrenals in its physiologic action, are invoked to bring forth evidence in favor of the electric nature of the nerve process. The quick improvement in nervous symptoms on thyroid removal is looked upon as striking evidence in support. Hyperthyroid subjects show signs of excessive reactions in both the first stage of ether anesthesia, and in infections. Crile considers the brain, linked with the other organs, the important center of reaction.

The state of the body which is in defense against an infective process or an acute intoxication, bacterial or nonbacterial is considered by Crile and his associates to be similar to the reaction to excessive emotion or excessive muscular exertion. That is, there is an increased output of adrenalin, a first stage of increased "stainability" of the nerve cells (interpreted as increased electric activity), increased thyroid activity, increased body temperature. As a result, the body may be worn down and overcome through the reactive process, with findings somewhat similar to the second stage of ether anesthesia and perhaps death at the end. That the brain is largely responsible for the reactive process is attested by the fact that narcotization will prevent a great part of it. When the brain-muscle connection is cut, there is no febrile response to the injection of toxins. "It would seem, therefore, that the brain cells respond to the presence of foreign proteins or of toxins by increased oxidation, thus causing an increased fabrication of electric energy which in turn drives the organism to make a febrile defense". The author similarly points to the part played by the muscles, the adrenals, the thyroid

in this reaction. The initial chill is the most dramatic sign of muscular involvement, while the fact that iodine itself may cause most of the systemic symptoms of an infection, as well as the frequently hyperplastic state of the thyroid in infections, is in favor of the intimate connection of that organ with the process. The nocturnal fall of temperature in fever, is explained as due to the necessity of "recharging" the brain; the same necessity which makes sleep essential even in health, but really essential for the brain alone of all bodily organs.

Overwhelming infection, the so-called "fulminant" forms of the infectious diseases, are supposed to produce trauma in the central nervous system entirely similar to that of "shock" caused by physical injury or excessive emotion, and are aggravated by the same conditions, i.e. fear, worry, loss of sleep, ether, muscular exertion. In the same way the best methods of counteracting them are fluids, warmth, rest, sleep, and morphin, all of which are considered to restore the electric energy by supplying water to the "batteries", on the one hand, and promoting oxidation and "recharging" by rest and sleep on the other, with the prevention of energy loss through loss of heat.

The above gives only a partial view of the biologic scope of this book, which includes such widely separated subjects as the neuromotor apparatus which moves the cilia of certain unicellular organisms, and the supposed function of the details of human neurohistology, as worked out by Cajal.

The work of Little and Loeb is cited, as well as that of Mathews and McClendon, with a number of other well known investigations such as that of Wilson and of Rignano in cytology. The author states that the importance of electrochemical processes in living phenomena has long been recognized. Whatever the future of his generalizations may be, Crile must be given credit for an ingenious synthesis of many scattered phenomena into a system which will certainly direct many further researches, especially in human clinical physiology.

## BACTERIOLOGY AND APPLIED IMMUNOLOGY FOR NURSES.

Robert A. Kilduffe, A.B., A.M., M.D.

Bruce Publishing Company, Milwaukee, Wis

This small book is complete and easy to read. It aims to supply in brief the main facts of bacteriology and applied immunology, covering the wide range of the known causes of infectious disease and their control, and may well serve to arouse a more direct interest in the many tests and preventive measures which concern the nurse at the bedside or in the clinic or doctor's office.

Two valuable and uncommon chapters, under the headings, "Applied Sanitation", and "The Collection of Specimens", directly concern the nurse's immediate duties. This section is full of practical details which are often omitted in large works, and emphasizes the prime duty of the nurse in the field of prophylaxis and as the director of small but important steps which may make or destroy the laboratory diagnosis on the patient in her care. Beginning with a plain and well-illustrated account of the different forms of bacteria, the author makes his way through the

methods used in their study, not omitting an account of their destruction by the common means of heat and chemical disinfection. The short chapter on the practical application of immunology in treatment gives an excellent explanation of vaccines and immune serums, and their different purposes, and preparation. In this we face the natural curiosity of patients, sometimes restrained in the presence of the doctor and revealed to the nurse.

The chapter on "Education of the Public" forms with the laboratory exercises, a fitting conclusion, showing the author's pains-taking care to include the wider public side of the subject with the narrow field of the microscope.

In general, the author strikes the happy mean between the naturally complex subject in hand and the temptation to make the text artificially plain and simple. Certain sections are less successful, perhaps due to the difficulty of the task. The Wassermann reaction is clearly explained as regards its laboratory routine, but cannot be made easy in principle to one who is not in daily contact with the terms used. The explanation of the symptoms of hay-fever as due to anaphylaxis, does not seem justified, since grave doubts, at least, have been cast on the supposition of the anaphylactic nature of diseases of this group in man, unless the term be used in a very broad sense. Again, it might seem advisable in a book of this kind to dwell more fully on the disastrous results which may follow, for instance, the accidental introduction of the Welch bacillus with a hypodermic injection. This mere possibility is enough to put added emphasis on the details of the care of hypodermic syringes and needles. But these are exceptions to the complete and practical trend of the book.

A systematic arrangement with numerous headings, which does not give too much space to any one portion, adds greatly to the ease of reference to any section. In the chapter "Applied Sanitation", all the important acute and chronic infectious diseases are listed with subheads: Cause, Portal of Entry, Mode of Exit, Transmission and Prophylaxis, the last being always expressed as concrete directions for the nurse in the sick-room. In this realization of the nurse as one of the most important links in the chain of co-operation against the chief infectious diseases the book falls in line with the attitude of modern clinicians.

## Communication.

### A VISIT TO BELLEVUE HOSPITAL, NEW YORK CITY.

(Letter from John Hammond Bradshaw, M.D., F.A.C.S., Orange, New Jersey.)

New York City was a town of 1000 souls. Master Jacob Hendrickszen Varrevanger, who was surgeon to the Dutch West India Company, needed a place to lay the head of a desperately ill patient. The date was 1658. The "Overseers of the Poor" offered the good doctor the shelter of a house provided he would accept under its roof the paupers of the village, the insane and also all the criminals. The doctor jumped at the chance of this wonderful offer. The exact site of this house, which was the germ from

which grew Bellevue Hospital, is not stated, but it must have been not far from the Battery, as one got into the woods when one journeyed so far as Cortland Street. Remember the date, as it is important, for in the year of our Lord 1658 was born the first hospital in the civilized era of American history. Bellevue, therefore, is famed as the first hospital founded in the United States. It is true the Aztecs, of Mexico, and the Incas, of Peru, antedated this in having buildings for medical and surgical purposes. This has been established. Yet nothing can take away the glory from Bellevue that it is the first hospital in America.

Almost a hundred years passes. We have little record of events in a medical way except the recording of a number of epidemics of small-pox, which in those early years scourged the rich and the poor alike. The "Publick Workhouse and House of Correction" was moved up town and established upon what is now the site of the City Hall. This was in 1735, and the city then had a population of about 8000 including all men, women and children. Here was provided a room 25x23 feet, on the upper floor on the Broadway side, with 6 beds. Dr. John Van Beuren was placed in charge at a salary of one hundred pounds a year, out of which he was expected to furnish all his dressings and medicines. Dr. Van Beuren, the first house physician in New York, was a Dutchman, but he was no fool, and he had been graduated from Leyden as a pupil of Boerhaave. As the chief object and purpose of the house was corrective, here were sent refractory people, slaves and otherwise, who could be whipped for the modest sum of one shilling sixpence. During the Revolution the inmates were hurriedly sent to Poughkeepsie for safe-keeping. The great fire occurred in New York in 1776 and about 300 destitute were admitted. The regular inmates returned after the war. This house in City Hall Park was occupied until 1796.

Although Philadelphia was larger than New York, the latter now had a population of about 25,000. Yellow fever and cholera made their regular visitations and hospital facilities were much strained. The streets were unpaved and wagons sank up to their hubs in the mud of lower Broadway. Many of the inhabitants fled to the village of Greenwich, which was 3 miles distant in the country. A special meeting of the Common Council was held to consider changing the site of the almshouse (which also then included the hospital). At \$3500 an acre, about 5 acres of land were purchased. The land was known as the Kip Bay Farm. This farm extended from what is now Second Avenue to the East River and was bounded by what are now Twenty-sixth and Twenty-seventh Streets. A building already on the farm and commanding a beautiful view of the East River was already called "Belle View". When the predecessors of the present buildings were erected, this name was changed to "Bellevue". This date is 1794. The Building Committee were obliged to make great haste, as the good ship "Antoinette" had just brought in many cases of yellow fever, so the first purpose of Bellevue Hospital on its present site was as a pest-house.

This brings us up to the year 1800, and I have dwelt so long on the history of this famous hospital because backgrounds are picturesque. The next 50 years are not happy ones to record. The 4 wild horsemen of Death,—Yellow Fever, Small-Pox, Cholera and Typhus Fever dashed



back and forth over the young institution. About 17 acres had been acquired and used as a truck farm; pigs, cows and chickens roamed over the tract and even came up on the steps of the buildings. The fence about the hospital was only about 5 ft. high, and bottles of whiskey and other things, almost as beneficial, were freely passed to the inmates. It was difficult to procure adequate nursing. Insane patients were nursed by the convicts. The male and female insane were housed in the same room. At times of pestilence it was difficult to procure nursing at any price. The visiting doctor in making his rounds would step over a score of the dead stretched on the floor, in order to reach the bedside of a patient often lying destitute of all clothing under a rough blanket alive with vermin. It is recorded that during one of the cholera or typhus epidemics, so many deaths occurred at once that in order to clear the way for the living, they were so quickly boxed in the rude pine coffins provided, that one day groans were heard coming from a pile of coffins stacked on one side of the room. A hatchet was quickly taken in hand and the sufferer released. At one time, out of 54 confinements, 28 women died. What do we think of such mortality as this: Phthisis 74%; delirium tremens 25%; puerperal fever 81%.

But this state of things could not go on. There arose at this time a young man, aged 34, Dr. James R. Wood, who saved the institution when an indignant city was about to pull it down, first by his courage and then by industry. He was a good deal of a politician himself and he best of all knew how to manage the politicians. Dr. Hosack had at this time lived and died. A number of prominent young men, Dr. Alonzo Clark, Dr. Fordyce Barker, and others, ably backed, Dr. Wood in effecting reforms. The island in the River, known as Blackwell's Island because of the Blackwell farm, was bought in 1828 for the sum of \$32,000. The insane and the criminals were placed thereon. This relieved the congestion and removed the most troublesome inmates and henceforth the institution became purely a hospital and not an almshouse or penitentiary. The next step was removal of the contagious cases away from the congested center.

The last half of the nineteenth century showed steady progress. During this time 2 epoch-making events took place at Bellevue which alone make this hospital celebrated for all time. The first Training School for Nurses was established there in 1873. The history of this school, the mother of all the nurse training schools in America, reads like a romance. An English woman of a religious order, Sister Helen, a disciple of Florence Nightingale, was fortunately secured as its first superintendent. The year 1873 is a noteworthy year in nursing. The Bellevue Training School for Nurses opened on May 1, the New Haven on October 1, and the Massachusetts General on November 1. This trio of schools educated the first trained nurses in America. Bellevue led all the rest, graduating women of high class, like Isabel Hampton Robb, who went from Bellevue to Johns Hopkins and started that celebrated school for nursing about 1890.

The other event that is often unknown or forgotten is also a record maker. In 1869 was inaugurated at Bellevue Hospital the first ambulance service for cities. The man who brought this honor to Bellevue was Dr. Dalton. A war

surgeon ('61) he had done remarkable service under Grant and had been medical director in charge of the transportation of the wounded in the Army of the Potomac. He had the record of transferring almost 50,000 wounded or dying soldiers from the field of battle within the space of 48 hours, which in those times was a great achievement. This rare war experience he brought to Bellevue and there started an ambulance service so perfected in discipline and detail that it has been but little changed to this day. The system has been adopted by the hospitals of the world!

The history of Bellevue is after all the history of the medical men of New York City. Starting in 1658 with the name of Dr. Van Beuren (a name still on the staff), we find the names of most of the famous physicians and surgeons; such names as David Hosack, James R. Wood, Alonzo Clark, Fordyce Barker, Valentine Mott, Williard Parker, Frank Hamilton, Henry B. Sands, E. L. Keyes, Lewis A. Sayre, E. L. Dalton, Alfred Loomis, Edward G. Janeway, Charles McBurney, T. G. Thomas, Thomas M. Markoe, Frederick Lange, William T. Lusk, Stephen Smith, Ellsworth Elliot, E. L. Holt, Frank Hartley, Frederick L. Dennis, Lewis A. Stimson, William T. Bull, William S. Halsted, Francis Kinnicutt, Charles Barrows, William M. Polk, Abraham Jacobi, Robert F. Wier, J. D. Bryant, Robert T. Morris, Henry C. Coe, E. L. Keyes Jr., J. L. Edgar, James Little, Walter James, M. Allen Starr, George D. Stewart, John F. Erdman, William C. Gorgas, the three Lambert brothers, C. F. Stokes, Howard Lillenthal, George R. Lockwood, W. Gilman Thompson, Frederick Peterson, Frank S. Meara; and besides these, taken at random, are names familiar to us in our own State of New Jersey, such as John F. Hagerty, Stephen Pierson, George Van Wagenen, Hugh and J. C. Young. Many important names I may have carelessly omitted because I do not now recall them. Most of these men began their career by internship at Bellevue.

Bellevue was one of the pioneers in what was first called antiseptic surgery. One of our noted New York surgeons, Dr. Robert T. Morris, was House Surgeon in 1882. In his little book, remarkable as one of the first on what is now aseptic surgery, "How We Treat Wounds Today", Third Edition, Putnam, 1887, on page 11 we read: "In April, 1883, when Dr. Frederick Lange introduced scientific antiseptics into Bellevue, a very active revolution in wound treatment started. \* \* \* In July, 1883, Dr. Lange went on duty as visiting surgeon to the Fourth Surgical Division of Bellevue Hospital, and in not one case from that time until the end of my service in April, 1884, did septicemia, pyemia or erysipelas attack accidental wounds". Dr. Lange, who in his early career had been first assistant to the great Eschmarch, uncle (by marriage) to Emperor Wilhelm II, is still living in Germany.

We have spent enough time telling of the past of Bellevue Hospital. We all have "pasts". The trouble is, some of us have little "present" and no "future". Bellevue has both. My visit to this hospital filled me with astonishment. I was not prepared to find today a hospital of over 1600 beds with a new hospital wing almost ready for occupancy which will add 500 beds to the institution. This little addition cost \$3,000,000. It is some little "wing". Since the new century, Bellevue has been happy in its management, and especially that for 17 years she commanded the full services as Superintendent of Dr. George D.

Hanlon, whose good work is being carried on today so well by Dr. Mark L. Fleming, the present chief. Although I was a stranger, he took me in. There was nothing he did not allow me to see. Although the politicians in the early part of the last century had used Bellevue as a good thing to exploit, having sold (mostly to their own advantage) the greater portion of the wonderful 17 acres for building lots, in these later years some of this has been recovered, and the original plot of ground has been increased in size by filling in hundreds of feet of East River. At present the site is excellent, flanked as it is on the east by the breezy river; on the south by the New York Yacht Club, which probably has more millionaire members than any club in the world; on the west by the skyline of the Metropolitan Tower; and on the north by those huge structures that furnish power for the 3 billion electric globes of light that give the city its artificial daylight and illuminates even the Great White Way.

Although it does not belong, strictly speaking, to Bellevue Hospital, the Metropolitan Morgue is housed in its basement and subcellars. I was unprepared to find "parlor, bedroom and bath" accommodations for 3000 bodies. As one enters, one thinks at once of a gigantic safe deposit vault in some metropolitan bank, but in whose thousands of boxes in their serried tiers from floor to ceiling there is nothing that will be stolen by the modern bandit. Each compartment with nothing visible but its 2x2 ft. closed steel door has its appropriate number and label. My guide asked me if I wished to see one of the bodies, and touched a spring. With astonishing speed the reclining figure of a nude girl almost sprang into view. As she had been a suicide case found floating in the river after 3 weeks' submersion, she was not a pleasant object to view. Another slight movement by the attendant and she instantly slid back into her own cold storage and safe deposit bedroom and the door was automatically closed, leaving us standing in an empty, beautifully tiled chamber, clean to the eye, brilliantly illuminated and senseless as to odor. It is mortuary efficiency brought to the nth degree.

Beginning thus with the horrors, I next asked to see the 200 ++ alcoholics. The neuropathic wards were interesting and most instructive. Did I want to see the violent cases? Yes. Here we find cases so crazed, mostly by drink and drugs, that the attendants often cannot keep clothes on the patients. I asked—where are the straight-jacket cases? My guide replied—"There are no straight-jackets used in Bellevue". Delirium tremens, in this place, the morbid-minded visitor can drink in great big draughts. There is nothing worse (usually) to see, to treat or to nurse in all the range of medicine. Imagine a room with large numbers of such patients all "going" at once! Again I was astonished. Yes, I was astonished—not at the bedlam (I was expecting) but at the order and decency and the mild and gentle arrangements and methods of restraint. Totally without straight-jackets, by skillful arrangement of the sheets of the bed those patients who were too violent, dangerous, or active, were absolutely restrained. Paraldehyde is the sheet anchor as to medication in these "D. T." cases. Of course a long confirmed whiskey drinker gets for a time a certain amount of whiskey. Without it he would die. But on an average, after 10 days these cases can be discharged, and then their future welfare or sudden return is "up to them".

I next wanted something pleasant. I got it. I

went out upon the river on the "Bellevue Hospital Day Camp Boat". Here is room for hundreds of little children. They are tuberculosis "contact" cases. Some were being taught in the rooms (always with wide open windows and screened decks) which are part and parcel of the Public School System of New York. The good hot lunches that were being served to these poor little wards of a humane city, almost excited those secretions known as making the mouth water. Remember, these children are not sick; they are "contacts". Imagine what it is for a child of the slums to come here and romp and play on these wide, sunny, safely screened decks, where without money and without price they can get Nature's ultraviolet rays.

But time was passing. By 11 o'clock I wanted to see Dr. George D. Stewart's famous clinic. Here, in the amphitheatre, were ranged, tier upon tier, students of Bellevue Medical School waiting the arrival of the great surgeon. It was in a similar room in this hospital that Dr. James R. Wood ("Jimmy Wood") used to put on his long black gown over his street clothes; this gown was black so as not to show former splashes of blood, and buttoned tight about his neck and wrist. On this gown, above his heart Dr. Wood pinned a red rose or carnation. Cheers always welcomed his dramatic appearance. Dr. Wood washed his hands after his operations.

One must attend one of Stewart's clinics fully to appreciate it. The day I was there was given up to a symposium on the gall-bladder. Case after case had been reserved for this clinic. Dr. Stewart is Professor of Surgery in the Bellevue Medical School, and while this was an operating clinic, it was also one for teaching. I think I listened to one of the clearest expositions on this subject while the patients were on the table. This did not interfere in the least with the progress of the operation. The hundred or more students had no chance to go to sleep and their tense attention was shown by their quick response to questions asked. Aside from the serious purpose of each subject, Dr. Stewart invested it with a peculiar charm by a quiet and steady undercurrent of wit and humor. His side talk on subjects philosophic or historical as well as surgical reminded me much of the clinics of the Mayo Brothers, which gives them the fame that is world-wide. While sewing up one case, I remember Dr. Stewart droned: "Stitch, stitch, stitch, in poverty, hunger and dirt", and suddenly looking up, he pointed a long finger at a student and asked "Who wrote that?" Instantly came the reply, "Thomas Hood." The quick answer evidently pleased the Professor, as, stopping his work, he smiled at the boy and said, "If I were teaching literature, I would pass you without an examination." But the very next moment came a serious and carefully detailed description of the ductus communis choledochus.

But my letter is getting long. We were getting hungry and soon sat down in the busy doctors' hospital dining room. The food furnished by the City of New York now filled my stomach, but my head was more full of what I had seen and heard during my short visit to Bellevue Hospital.

#### Her Long Suit.

You can't blame a spinster for being particular; if she hadn't been particular she wouldn't be one.—(Birmingham Press.)



## Observations from the Lighthouse.

### THE TOXEMIAS OF PREGNANCY.

One of the very interesting symposiums presented at the Dallas session of the American Medical Association consisted of 4 papers read before the Section of Obstetrics and Gynecology upon the general topic of toxemia accompanying pregnancy. These were all by men of large experience and each of whom could speak with authority upon certain aspects of the problem. Since that meeting several other important papers bearing upon the same topic have appeared in medical literature and we present them here in abstract form.

### PRESENT STATUS OF THE TOXEMIAS OF PREGNANCY.

Under the above title, J. O. Polak, (J. A. M. A., 87:226, July 24, 1926) wrote as follows:

The types of toxemia to be considered in this discussion are hyperemesis, the preëclampsic toxemias and eclampsia.

Until recently the etiology of the excessive vomiting of pregnancy has been a question of great dispute. At present all clinical evidence tends to substantiate the theory that hyperemesis is the result of a vicious cycle beginning with a carbohydrate deficiency, as suggested by Duncan, Harding and Titus, and that the pathologic changes found in the liver, kidneys and blood are the result of starvation and dehydration. That pernicious vomiting is a serious complication of pregnancy is evidenced by the fact that it has a mortality of more than 20%.

The very fact that mild cases of nausea and vomiting of greater or less degree occur in more than 50% of pregnant women and are held to be almost inevitable is evidence that there is a temporary disturbance of the physiologic balance in the majority of women who become pregnant, and, furthermore, that there is a relative carbohydrate deficiency due to the unexpected demand for glycogen on the part of the fetus and growing uterus, and an actual deficiency due to the nausea and vomiting and the consequent lessened intake.

The amount of fluid lost by vomiting will vary with the particular case. I have frequently measured the quantity of this vomitus and found that it ranges between 500 and 1500 c.c. daily. Such a fluid loss repeated day after day quickly dehydrates the woman and produces the clinical picture of dehydration with the dry skin, dry coated tongue and dry, cracked lips.

Continuous vomiting likewise produces rapid emaciation by starvation; lowers the blood pressure; gradually increases the rapidity of the pulse; diminishes urinary output; increases the concentration of the body fluids, and allows the development of general toxic symptoms, similar to those found in extreme starvation. These cases, furthermore, almost invariably show a low leukocyte count, which is further evidence of poor resistance.

In the mild cases, certain hygienic and dietetic principles must be impressed on the patient. First, there must be insistence on marital abstinence, for pelvic reflexes always increase the gastric irritability. Second, to combat the dehydration and consequent toxicity there must be a copious ingestion of water, usually in the form

of some alkaline water. Third, to meet the carbohydrate deficiency we must insist on an increased intake of carbohydrate in the form of cereals, fruit juices with sugar, puddings, custards, chocolate or candy.

These general principles should be supplemented by rest in bed after meals, and the internal administration of small doses of thyroid extract. Should the vomiting persist and the patient lose weight, rest in bed with absolute isolation is to be insisted on; and the fluid loss made up by hypodermoclysis, enteroclysis and the intravenous injection of glucose solutions, amounting to 1000 c.c. daily of 10% solution, until diuresis is produced.

When glucose alone or in combination with insulin fails to produce this movement, I have employed transfusions of 300 c.c. of human blood by the direct method, to which is added 500 c.c. of physiologic sodium chloride solution. The success of these procedures has been so satisfactory that I have not had to empty the uterus for vomiting in a period of nearly 5 years.

It must, however, be impressed on the attendant that if, under this plan of treatment properly carried out for a period of a week, diuresis is not produced and the vomiting continues, the uterus should be emptied. As soon as vomiting ceases, the patient should be given solid food with a high carbohydrate content. Should no improvement take place after transfusion, the uterus should be emptied.

### Preëclampsic Toxemias.

The situation in preëclampsic toxemias is not the same as in pernicious vomiting, except that they both occur in pregnant women, and that in fatal cases the liver is always seriously involved.

In the study made by Herrick at the Sloan Hospital, where every toxemia of the later months is studied by the internist as well as by the biochemist and the obstetrician, they have come to the conclusion that the woman who develops a preëclampsic toxemia or an eclampsia is the woman who starts on her pregnancy with defective emunctories or an unbalanced endocrine system. It is the result of a dysfunction and improper correlation of the eliminative system and endocrine control in the individual woman. My own study tends to confirm this theory, which has a definite clinical backing.

The preëclampsic toxemias are usually considered under:

(1) The hepatic type, which is commonly of sudden development with a nephrosis, as the kidney lesion without any preëxisting history of renal disease.

(2) The renal type, in which nephritis is a contributing etiologic factor. The clinical distinction between these two types in antepartum toxemia is difficult to make, though in the former there is a previous history of renal disease, while in the latter there is always some clinical evidence of preëxisting kidney lesion. However, after the labor is terminated the hepatic type is shown by the relatively quick return of the blood pressure and kidney function to normal, while in the renal type it may take months to clear the urine of albumin and casts, and the blood pressure never ranges below 140.

The earliest evidences of toxemia are: (1) A rise in the systolic blood pressure. (2) The appearance of an albuminuria coincident with or appearing soon after the occurrence of hyperten-

sion. (3) Diminished urinary output—the quantity of urine eliminated falling below 1000 c.c. (4) An increase in the body weight beyond the normal 25 pounds (11 kg.). (5) The appearance of edema in the face, hands and feet. (6) Constipation associated with "heartburn" and epigastric distress. (7) Frontal headache. (8) Eye symptoms, ranging from spots before the eyes to amaurosis.

The treatment of the preëclamptic state and of eclampsia is essentially medical. The obstetric problem comes in for consideration only when labor is established by the convulsive seizures. Notwithstanding the fact that convulsions cease in 52% of the cases when the uterus is empty, we are not justified by the results in any extensive series of clinical observations in making delivery the first consideration in view of the poor surgical risk.

Naturally, the treatment of the latter month toxemias resolves itself into: (1) Prevention. One of the greatest strides in preventive medicine has been the antepartum care given to the pregnant woman. It has resulted, in many clinics, in the passing of eclampsia. (2) The control of the convulsion. (3) The management of labor in the presence of convulsions when labor has started.

The preëclamptic toxic patient should be in bed. She should have her nitrogenous intake limited to just enough to sustain life—milk and fruit juices with sugar make up the foundation of her diet. Stimulation of her emunctories should be done by producing diuresis. This may be done with water and the intravenous use of glucose solutions, except in the cases of edema, when the exhibition of fluids should be restricted and diuresis stimulated by lumbar cupping, ammonium chloride and calcium chloride. The skin must be kept active. This effect may be secured by having the woman rest between blankets or with the electric baker. To favor surface relaxation, the nitrites will add to its efficiency. When no improvement is shown, pregnancy must be terminated by obstetric procedure. The method should be determined by the existing obstetric condition, always keeping in mind that the toxic patient is a poor surgical risk, bearing anesthesia poorly, liable to shock, and more susceptible to infection than her better equipped sister. Haste and trauma must be avoided.

In the presence of convulsions, the indications are never surgical. With the appearance of the first convulsion, the woman should be given (hypodermically)  $\frac{1}{4}$  gr. of morphin sulphate; placed in bed in the Trendelenburg posture, and turned on the side to allow the mucus to drool from the mouth. The tongue must be protected by a "gag"; the bladder emptied by catheterization. If the pressure is 150 or more, 1000 c.c. of blood should be withdrawn. This may be replaced by 500 c.c. of a 10% glucose solution. The morphin is repeated in an hour, and nothing else is done.

Unless the convulsions recur and the supervening coma increases to a degree that the patient remains comatose between convulsions, this condition is an indication for the intravenous use of magnesium sulphate in quantities of 100 c.c. of a 25% solution, which has had a most kindly effect, diminishing the cerebral edema and controlling the occurrence of subsequent convulsions.

The management of labor in the presence of eclamptic convulsions is based on the 3 principles of: (1) avoiding trauma; (2) preventing infection, and (3) diminishing the shock.

## ECLAMPSIA AT THE CHICAGO LYING-IN HOSPITAL.

In this report, J. P. Greenhill (J. A. M. A., 87:228, July 24, 1926) analyzes the cases of eclampsia at the Chicago Lying-In Hospital from July 1, 1917 (when the new hospital was opened), to January 1, 1926. During these 8½ years there were 29,587 obstetric patients. Of this number 20,226 were delivered in the hospital and 9361 were delivered at home by our dispensary service. Among these 29,587 patients there were 83 who had eclampsia, an incidence of 0.28%. Five of these women who were delivered at home were colored and were sent to other institutions. The remaining 78 patients with eclampsia were admitted to the Chicago Lying-In Hospital, and a study of these cases forms the basis of this paper.

Among the 78 cases of eclampsia analyzed there were 6 maternal deaths (7.7%). If we deduct one moribund, untreated patient, the mortality is 6.5%. In 50%, the convulsions began before labor; in 20.5%, during labor, and in 29.5%, after delivery. The maternal mortality for these groups was 10.3, 0 and 8.7%, respectively, and the fetal mortality was 41, 18.8 and 17.4%, respectively.

The incidence of operative deliveries was 62.5%. However, while 36.3% of all the labors terminated spontaneously, labor had been induced in 11.3% of them. Hence, only 25% of the patients had both a spontaneous onset and spontaneous termination of labor.

Convulsions ceased after delivery in 78.2% of the cases in which they began ante or intra partum. Among the 15 abdominal cesarean sections, convulsions began before operation in 12, and in all of these cases the convulsions ceased after operation.

The maternal mortality for the various forms of delivery was: spontaneous, 3.4%; cesarean section, 6.7%; forceps, 9.5%, and version and extraction, 14.3%. The fetal mortality for these groups was: forceps, 9.5%; abdominal cesarean section, 17.6%; version and extraction, 28.6%; spontaneous, 30%, and vaginal cesarean section, 100%.

Of the 78 patients, 59% had no prenatal care, 23% had very poor observation during pregnancy, and 18% had good prenatal care.

There were 5 pairs of twins (6.4%). Among the 83 babies there were 23 deaths (27.7%). However, the fetal mortality of the babies that were alive when their mothers entered the hospital was only 20%. Of the 15 dead babies that constituted this 20%, only 1 weighed more than 2000 gm. (4 pounds 7 oz.). Only 62.7% of all the babies weighed 2000 gm. or more.

Of the 72 patients who left the hospital alive, 60 (83.3%) were traced. Of this number, 2 died of chronic nephritis, 3 now have chronic nephritis, and 55 (91.7%) are well. Among 18 subsequent pregnancies, 10 ended normally and one is in progress now. One patient had another attack of eclampsia, and 3 had preëclamptic symptoms for which the pregnancies were ended. Hence, among the patients who completely recovered after the attack of eclampsia, 26.7% of those who subsequently became pregnant developed signs and symptoms of toxemia. These patients again recovered completely.

As a result of this study we feel that the treatment of antepartum and intrapartum eclampsia should not be entirely conservative nor entirely radical. However, in experienced hands we favor



emptying the uterus in most cases, and the method selected depends on the condition of the patient, the size of the baby and the state of the cervix. Where the patient is a primipara with a viable baby and the cervix is undilated, we prefer to terminate pregnancy by a low or cervical cesarean section under local anesthesia as soon after the first convulsion as possible. We believe that all patients with eclampsia should be sent to a hospital. When a patient must remain at home the treatment should be conservative. It should also be conservative in a hospital when the attending physician is not skilled in operative obstetrics.

#### REPORT FROM THE NEW YORK LYING-IN HOSPITAL.

Asa B. Davis and James A. Harrar (J. A. M. A., 87:233, July 24, 1926) say: It has been our privilege during the last 30 years at the New York Lying-In Hospital to study and in part to treat 879 cases of toxemia of pregnancy of the convulsive type, commonly known as eclampsia. These cases have consecutively occurred in a series of 152,248 confinements in the combined indoor and outdoor services. Included, there are 414 cases with convulsions beginning before labor; 74 cases in which the time of onset was not definitely noted, but the majority of which evidently began antepartum; 118 cases in which convulsions began during labor; 234 cases in which convulsions began during the puerperium; 23 cases in which the patients died undelivered shortly after being admitted in a moribund condition, and 16 in which the patients were discharged undelivered, pregnancy continuing.

During this time our conception of the control and treatment of the disease has varied greatly. The pendulum of procedure has swung back and forth, and while we may be still far from a scientific treatment based on an accurate etiology, we at least have come to believe that the eclamptic patient is as much a medical as an obstetric problem, and with the accompanying corollary, that obstetric intervention should be for obstetric indications only, and not for the convulsions.

We feel that we must remain content for the present with this principle of treatment, even though we also find statistically that the sooner the woman comes to delivery after the first convulsion the better are her chances for recovery.

There are undoubtedly 2 distinct types of toxemia of pregnancy, not always easy to differentiate in the emergency patient just admitted in convulsions. One, the so-called true toxemia of pregnancy which, although it may be severe, is transitory in character. When visual disturbances appear in this class, they are usually due to edema and promptly subside after delivery, leaving no permanent injury. The other is found in patients already handicapped by an underlying cardiovascular nephritic condition prior to conception. Pregnancy, adding its extra demands on such kidneys, not infrequently develops a toxemia which is rather akin to uremia. When symptoms of toxemia appear in this class, there is great danger of retinal hemorrhage and separation resulting in partial or complete permanent blindness.

Apparently we must be more apprehensive of the convulsive type of toxemia developing in our pregnant patients during the spring months than at any other time. In 1905, one of us (J. A. H.) was able to point this out in a graph, charting 150 cases. A similar group of 853 listed cases of

eclampsia occurring over a period of 30 years shows a similar curve of incidence increasing from January to a high point in April, and reaching its lowest in July; again rising during the autumn to the January point. So we might be especially watchful for albumin and rising blood pressure readings during March, April and May.

We are gratified to note that comparatively few patients develop eclampsia who have received antepartum care. The majority of those admitted are emergency patients who have lacked such care. As to the treatment of the convulsive type when it occurs, we have not yet arrived at an entirely routine standard method, but must continue to be guided by the circumstances in each case. Practically every eclamptic patient admitted is given  $\frac{1}{2}$  gr. morphin hypodermically, at once. This can be done quickly, and soon holds or controls the convulsions. The alimentary tract is emptied by means of colonic irrigations and lavage, followed by 2 oz. of magnesium sulphate through the stomach tube in situ. The free use of morphin is then continued in  $\frac{1}{4}$  gr. doses hypodermically, its physiologic effects being kept well in evidence. We rarely induce labor for the convulsions, and many patients fall in labor spontaneously. Labor should be encouraged and may be shortened safely by easy low forceps.

As to the employment of phlebotomy in the treatment of eclampsia, it is no new departure. For many years we have bled in certain cases, in some of which the improvement was almost startling. In plethoric women, bleeding at delivery is encouraged. Often eclamptic patients bleed very little. In the type in which convulsions continue after labor, phlebotomy is of the greatest value. It is a mistake to bleed every patient, especially before delivery. We occasionally see a patient have a sudden fall of blood pressure and the appearance of cardiac failure after delivery. This is likely to be accompanied by pulmonary edema, a common cause of death in eclampsia. Such patients are saved, if at all, by the prompt use of cardiac stimulants, dry cupping the chest, and some effort at drainage of the trachea. Turning on the side may aid. Two patients were apparently carried through their acute pulmonary edema by courageous house surgeons aspirating the trachea frequently with a tracheal catheter until the cardiac stimulants had a chance to get in their effect. Moore of Philadelphia has revised an aspiration apparatus operating through a bronchoscope that should be of signal service in such emergencies. Of 64 patients on whom phlebotomy was done, 16 died; a 24% mortality. It must be evident that a large, robust, full blooded woman can under such circumstances well afford a considerable loss of blood. This does not hold if the patient is small, ill nourished and anemic.

While rather recently the use of magnesium sulphate intravenously has been proposed and tried with apparently good results, our experience has been too limited thus far to allow us to pass judgment on its value. In 5 cases during the past year, 4 c.c. of a 50% solution of magnesium sulphate injected 2 or 3 times intravenously, given very slowly, has been of signal success in controlling the convulsions. All 5 patients recovered. We use the same ampules that we employ in the magnesium sulphate, morphin and rectal ether analgesia for the relief of pain in labor.

### MAGNESIUM SULPHATE INTRAVENOUSLY.

This form of treatment in the care of pre-eclampsia and eclampsia cases is strongly advocated by Lyle G. McNeile and John Vruwink (J. A. M. A., 87:236, July 24, 1926): We are frankly aware of the fact that from time to time enthusiastic measures have been advocated for the care and treatment of eclampsia. We also know that the etiology of eclampsia is yet unknown and that rational therapy depends on definite knowledge of causation. No empiric treatment can be dogmatic, and we offer this study of magnesium sulphate intravenously only as a valuable adjunct for the care of the acute toxemias of pregnancy. It may not always accomplish satisfactory results alone, but we are convinced that, in conjunction with other recognized measures, it will give better and more definite relief. Our own first efforts included the established procedures for the care of eclampsia; but, as our experience with the salt increased, our timidity ceased, until now we very frankly believe that we can usually depend on intravenous medication to prevent and control convulsions.

In the pre-eclamptic type of toxemia, the intravenous injection of 20 c.c. of a 10% solution of magnesium sulphate nearly always gives immediate relief from subjective symptoms. The patient frequently comments on the immediate disappearance of the sense of "constriction" or "impending disaster". We believe this immediate comfort primarily due to the anesthetic properties of magnesium sulphate. Administration of the drug is usually followed by some reduction of edema (probably including cerebral edema), and an increased output of urine.

During the convulsive stage of a toxemia of pregnancy, the intravenous injection of 20 c.c. of a 10% solution of magnesium sulphate will generally stop, or at least limit, the number of convulsions. It may be, and usually is necessary to repeat the injection, both for the control of convulsions and for the relief of other toxic symptoms. The use of this drug apparently not only controls the convulsions but exercises a favorable influence on other symptoms due to acute lesions in the parenchymatous organs.

The Los Angeles Obstetrical Society, 2 years ago, appointed a committee (Lazard, Irwin and Vruwink) to study, collect and report on the results of magnesium intravenously in eclampsia. This extended report with case records has been prepared for publication, and the startlingly good results have verified the earlier predictions regarding its use. This report includes all the known instances in which magnesium sulphate has been used intravenously in concentrated solution for the prevention and control of eclampsia. Most of such cases were collected in and around Los Angeles. The series consists of 142 records, 45 of pre-eclamptic and 103 of eclamptic patients. Of the pre-eclamptic patients, 23 were at the Los Angeles General Hospital and 22 were private patients. Six of the pre-eclamptic patients developed convulsions and were therefore classified as eclamptic. Thirty-eight delivered spontaneously, 3 labors were induced, and 5 were assisted in labor by forceps or version and extraction. There were 7 elective cesarean sections, all in private practice. There were 24 living babies, 6 premature stillborn and 3 full term stillborn babies.

In the eclamptic series, there were 103 cases, 54 at the General Hospital and 49 in private

practice. Eighty-nine patients recovered and 14 died from all causes, giving mortality of 13.6%. Of these deaths, 1 occurred 3 weeks postpartum from sepsis, after the patient had definitely recovered from her eclampsia. One died 6 days after her last convulsion on the operating room table during cesarean section, from shock; the uterus was everted. One patient had bronchopneumonia and pulmonary edema, and was moribund when admitted to the hospital. Two, as proved by necropsy, had no liver changes of eclampsia and presented true cases of nephritis. A correction for these deaths is unquestionably permitted in a discussion of the effect of magnesium sulphate in eclampsia, and we have 100 cases with 9 deaths with a mortality of 9%. There were 7 deaths from toxemia at the General Hospital in patients poorly qualified to withstand the shock of toxemia. There were 75 babies born in antepartum or intrapartum eclamptic mothers. Six patients died undelivered. In each instance, operative intervention would only have increased the already grave prognosis. There were 48 living babies, 16 premature stillborn and 10 full term stillborn infants.

It was a little difficult to adjust ourselves and give only this intravenous medication; but, as our results improved with decreased handling and less medication, the following scheme of treatment for all the General Hospital patients was advised.

Treatment of pre-eclamptic toxemia: (1) Usual restriction of diet (nonprotein salt free). (2) Pushing of fluids. (3) Bowels kept active with magnesium sulphate,  $\frac{1}{2}$  oz. daily. (4) Daily output of urine measured (chemical and microscopic examination daily). (5) Blood pressure taken twice daily. (6) Twenty c.c. of 10% solution of magnesium sulphate to be administered intravenously when systolic blood pressure is 150 or over, repeated if indicated (by rise of blood pressure or increase in other symptoms of toxemia). (7) Interruption of pregnancy only to be done with consent of senior attending obstetrician. (Termination of pregnancy is indicated only when symptoms persistently recur and do not respond to treatment.)

Treatment of eclampsia: (1) Give 20 c.c. of 10% magnesium sulphate intravenously as soon after first convulsion as possible; repeated every hour after until convulsions are controlled. (2) Blood pressure taken every hour after convulsions are controlled, and if blood pressure begins to rise nearing its height at time of convulsions, magnesium sulphate repeated; also repeated if convulsions recur. (3) Patients who are comatose or very restless in a semicomatose delirium and whose blood pressure is falling should receive chloral hydrate, 20 gr. and sodium bromide, 60 gr. by rectum. (4) Utmost quiet to be observed and nurse to be constantly with patient until latter is out of coma. (5) Oxygen inhalations to be given after each convulsion until breathing is normal. (6) All patients to be prepared for delivery as soon as they are quiet enough. (7) If patient is in labor, nitrous oxide gas for pains. (8) If in second stage of labor and proper progress is not being made, low forceps extraction or version, with the consent of attending obstetrician. (9) No cesarean section to be done without consent of the senior attending obstetrician. (10) Attending obstetrician to be notified as soon as any eclamptic patient is received in the ward.



## Lay Mirror Reflections

At the last annual meeting of the State Society the Executive Secretary was authorized to purchase a moving picture outfit for use in the general education campaign being conducted from his office—a program which, as explained in his annual report, embraces the exhibition of scientific films at medical society meetings, and public presentation of films specially prepared for lay audiences. This purchase has been made and steps have been taken toward the development of a program of public education in medical matters. It is interesting to note that the College of Surgeons devoted one session of its recent Congress to consideration of the moving picture in relation to medical education. The general spokesman for the motion picture industry addressed the meeting and a report of his speech and the general proceedings is herewith given, as it appeared in the Newark Evening News, October 29, 1926.

### WIDER MEDICAL KNOWLEDGE OFFERED WORLD THROUGH "LIBRARY OF FILMS".

**American College of Surgeons Adopts Plan After Hearing Will H. Hays Tell How Far Off Corners Would Benefit by Proposal.**

MONTREAL, Oct. 29.—American motion pictures entered a new scientific field today, that of medicine and surgery, sponsored by one of the world's leading medical societies, the American College of Surgeons. Will H. Hays, head of the picture industry, joined with the scientific men in the plans to give the entire world the benefit of medical and surgical pictures.

The board of regents of the college adopted the report of a special committee advocating the use of movies. Mr. Hays, who spoke at the meeting, expressed the belief that motion pictures could be made a factor in developing a stronger race. He also was on the speakers' program of the convention of the college which convened after the regents' meeting.

The special committee suggested that a bureau of information be established at the headquarters of the College of Surgeons, in Chicago, to make available information as to what films are obtainable.

Part of the committee's work would be to determine and develop the demand for such films by communication with universities, medical schools, public health organizations and various medical or surgical societies.

Suggestion that definite action be taken immediately was made by the committee, the members of which are: Dr. J. Bentley Squier of New York City, chairman; Dr. W. W. Chipman of Montreal, president of the American College of Surgeons; Dr. Franklin Martin, Chicago, director general of the college; Dr. C. H. Mayo,

Rochester, Minn.; Dr. Allen Craig, Chicago; Dr. George W. Crile, Cleveland; Dr. Bowman Crowell and Dr. Malcolm Maceachern. Mr. Hays was made an honorary member.

Mr. Hays, in his address before the regents, said in part:

"As I look upon it today, the motion picture is simply another great instrument in the service bag of the doctor.

"In addition the moving picture can and will help the doctor teach the value of health, the importance of proper living, and the need for personal attention to details of hygiene and contagion.

"I also see the motion picture in the hands of the diagnostician, who is studying it for the subtle movements and phases of a case which the camera alone can bring out. I see it being used in hospital wards where recreation and amusement are essential but where only the film can go.

"Moreover, the motion picture can and will preserve for future generations of medical men—especially the surgeons—the technic and operative skill of the eminent surgeons of the day, so that these great men of science will continue to 'operate' even after their deaths. \* \* \*

"Does it not sound like a miracle—the story of a few hundred feet of film, small enough to be put into an overcoat pocket, taking the work of the masters of technic to the most remote parts of the earth, where students by the thousands and tens of thousands may sit at their feet and learn. The provincial medical man, handicapped by distance, by lack of funds and opportunity, acquires a knowledge that otherwise he could never attain."

### THE TRUTH WILL PREVAIL.

An understanding of the conditions attendant upon scientific annual experimentation is so unusual, and voluntary explanation, or defence, of the experimenter's work, by an intelligent layman is so rare that the following editorial from the Evening Post, New York, October 20, 1926, seems deserving of reproduction for our readers:

A good deal of misapprehension still exists on the subject of vivisection. It has been hard to realize the truth of the situation regarding scientific experiments on animals, because the opponents of this method of adding to the sum total of human knowledge have been inclined to be more than a little unreasonable. Dark hints about the terrible things that go on behind the tightly closed and locked doors of laboratories have given many a sentimental lover of animals nightmares, but there is no longer any necessity for innuendo and suspicion. The worst may be known at first hand. Most medical laboratories, including the animal rooms, have been discovered by the American Association for Medical Progress to be open to the public, and in many instances special invitations are sent regularly to the officers of humane societies to attend experiments or to investigate the conditions under which animals are kept. Here and there a laboratory imposes slight restrictions, but the general rule is that a responsible person may, if he wishes, find out for himself the exact status of the matter. The rules regarding animals, now in vogue in

medical schools and research laboratories all over the country, are as thoroughly humane as any one could ask—any one except the extremist who opposes on principle the use of any animal for experimentation. And the open privilege of inspection gives every assurance that the rules are carefully observed.

## ESSEX COUNTY PLAYGROUNDS.

The Essex Park Commission has done such excellent work as to attract the attention of nature lovers and those who have the welfare of humanity at heart, even outside the boundaries of this state. The New York Times of October 24, 1926, commented upon the marvelous development of the public park system of Essex as follows:

### ESSEX PARK PLAYGROUNDS.

When New Jersey in 1895 authorized permanent Park Commissions there were only 25 acres of park land in Essex County. The lover of nature, the hiker, the picnicker, had no woods to range through. Newark and the suburban towns had no rustic breathing spots for their people, no playgrounds for the children. There was no water for a boy to sail a boat in, hardly a place where a band concert could be given. Trespass signs were posted in every woodland. The people had no land for recreation. Newark was an ugly city; a city, too, of dull work and few opportunities for play. The county's permanent Park Commission entered upon its duties with the support of only the idealists. Taxpayers were alarmed lest large sums of money would be squandered. Last year the 25 acres of park land had grown to 3764, and the people were seeking recreation in the wild South Mountain reservation of 2056 acres in the townships of West Orange, South Orange and Millburn; in the Eagle Rock reservation, 408 acres, easy of access from Montclair, Verona and West Orange; and in 15 parks in Newark, Orange, East Orange, Bloomfield, Verona, Caldwell, Belleville, Nutley, Irvington and Upper Montclair. These were the people's lands, dedicated to their use.

When the Park Commission proposed to acquire the forests now known as the South Mountain and Eagle Rock reservations it was predicted that such large tracts would be wasted on the indifferent people of Essex. The tax burden would be oppressive. But the park lands are paying for themselves in revenue derived from taxation of property which they improve. Thirty years ago Essex had a population of 300,000. Now it exceeds 750,000. The assessed valuation in the county, was \$181,665,000 in 1895; now it is \$1,310,592,203. Impressively has the judgment of the first commission been vindicated. Looking to the future, the present commission asked the Legislature of 1926 to enact a law authorizing the issue of park bonds to the amount of \$5,000,000, to be issued from time to time "as may be required". The people of Essex will vote on the proposals a week from Tuesday. Surely no one who realizes what a boon the county parks have been will vote against it.

From Spring to Fall hikers, equestrians and walkers troop into the reservations on every Saturday afternoon, Sunday and holiday. There are springs to drink from and stone fireplaces for picnicking. In May and June masses of azalea, laurel and rhododendron enchant

the visitor. Dogwood whitens every vista. The forest floor is gemmed with flowers. Through the valley of South Mountain flows a sparkling stream in which trout may be taken. Wooded slopes rise, tier on tier. The forest growth, mainly of oak, but interspersed with tulip, beech, hickory, elm, hemlock, pine and cedar, contains superb specimens. Washington Rock at the south end of the mountain reservation has Revolutionary memories that attract thousands to it. As the commission's report of 1925 says, "this is one of the finest reservation heritages with which any community was ever blessed." But the city and town parks, particularly areas like Weequahic (315 acres) and Branch Brook (280 acres) in Newark, minister to the pleasure of more thousands with their gardens, baseball and football fields, athletic tracks, tennis courts, golf links, wading pools and playgrounds for children, and waters for canoeing and miniature yacht racing. Formerly most of these parks were waste land disfigured with rubbish, weeds and shacks. The transformation, as pictures show, has been magical. No public body is doing a greater work for the happiness of the people of Essex than the Park Commission.

## National Medical News.

### LIQUOR PRESCRIPTIONS.

In writing prescriptions for medicinal liquor, a physician shall not name therein the name of a pharmacist who may fill the prescription, and the space provided in form 1403 for such information shall now be left blank. This is an important alteration of the regulations previously issued by the Treasury Department, and has been mandatory since October 15, 1926. Concerning this new order, the J. A. M. A., of November 6, says editorially:

"Heretofore a physician who omitted from a prescription for liquor the name of the pharmacist who was to fill it violated a regulation made under authority of the National Prohibition Act. Since October 16, a physician who inserts that name violates the regulation. Over night what was lawful became unlawful. On the day when the change took effect, the news columns of the daily press carried more or less inconspicuous items concerning it. Later, mimeograph copies of the treasury decision by which the change was brought about were sent to a selected mailing list. But if the decision has ever been published so as to reach in an official form, through the newspapers or otherwise, the 80,000 physicians holding permits under the National Prohibition Act, the evidence as to the fact is not apparent.

Regardless of the manner in which the change has been made public, the medical profession will welcome the relief that this treasury decision brings. When the Prohibition Commissioner, in 1923, proposed to make the physician name on each prescription the pharmacist who is to fill it, the American Medical Association urged that such a requirement would impose unnecessary difficulties on the physician, might cause dangerous delay in filling the prescription, could accomplish no good, and would facilitate collusion between certain types of physician and pharmacist. The regulation was nevertheless promulgated. That the prohibition unit seems now to have seen the error of its way, and that the Com-



missioner of Internal Revenue corrected the mistake heretofore made, so far as correction is possible, is therefore gratifying.

Congress can not prescribe every administrative detail of legislation. Usually it can only point out by statute the objective to be attained and empower some department head, bureau chief, board or commission to fill in the details by regulation. In the present instance, officers entrusted with such power have formulated regulations in the privacy of their Washington offices without notice to interested persons, and have issued them to take effect before the physicians and druggists who must live under them have had an opportunity to adjust themselves to the new conditions. Here is a fine example of the danger inherent in legislative power vested in administrative boards and officers. Representatives of druggists and pharmacists, who fill prescriptions for liquor, had, it is said, a potent voice in framing the regulation now under discussion. That, however, is only the more reason why representatives of physicians, who write such prescriptions, should have been consulted.

Any physician can today lawfully tell his patient, orally or in writing, the name of the pharmacist to whom it had better be taken, provided only that he does not write that name on the prescription in the space originally provided for that purpose. Why he should not be allowed to give such advice, if he wants to, frankly and openly on the prescription, is not apparent.

Under our democratic form of government, the people who must live under regulations have the right morally, if not legally, to be heard while such regulations are being formulated. They are entitled to sufficient notice of the promulgation of such regulations, to enable them to adjust their affairs to the new conditions. Authentic copies of regulations should be available promptly after the promulgation. The very ease with which regulations may now be promulgated constitutes the strongest temptation to hasty and illconsidered policies. Our government, we are told, is a government of law, not of men. But if a man happens now to be vested by Act of Congress with authority to promulgate regulations having the force of law, that man may be the law—at least it is difficult to tell the difference between them. Within certain limits and properly regulated, such autocracy may be necessary; beyond those limits and regulations, it is tyranny.

#### MAKING A BAD LAW WORSE.

If there has ever been a more foolish piece of national medical legislation, a law more burdensome and more obnoxious to the honest physician, than the Harrison Narcotic Act, we cannot at the moment give it a name. In face of the demonstrated futility of this law, in face of the fact that it has not only failed of its alleged purpose but has proved itself an infernal nuisance to innocent practitioners of the healing art, it is now seriously proposed in Congress that the worst features of this law shall be developed into something even more offensive and odious than they are at present. There is no reason to believe the proposed changes will achieve any more effective results as regards control of the use of narcotic drugs; there is very patent reason to conclude that these changes will subject physicians to a series of nuisances, dangers and possible blackmailings.

The profession should act—quickly and forci-

bly—to prevent enactment of the proposed amendments. As the prohibition amendment was in a sense "put over" on an unsuspecting public, so the original Harrison Act was perpetrated upon a profession that had no suspicion of what it would actually do; we favored control of the use of narcotics, would have favored any honest effort to save or protect the lives of unfortunate beings that had fallen victims to drugs, but we little dreamed that we were in the same act subjecting our professional conduct to the control of government officials utterly incompetent to supervise our work. It was "put over" on us once; it will be our own faults if we permit repetition of such a thing.

That you may understand what is being attempted, and thus prepare to assist in defeat of such efforts, we reproduce here part of a pamphlet recently prepared and issued by the A. M. A. under the title "Strengthening the Harrison Narcotic Act":

"A bill to strengthen the Harrison Narcotic Act of December 17, 1914, as amended, and for other purposes, S. 4085, was introduced in Congress, April 24, at the instance of the Treasury Department. The purpose of this bill, says Assistant Secretary of the Treasury Andrews, is "to clear up certain points which have been raised in certain courts to the disadvantage of the government". These points are to be cleared up (1) by requiring collectors of internal revenue to refuse registration to physicians whom they believe narcotic addicts; (2) by requiring pharmacists to determine whether physicians' prescriptions were or were not issued in the course of professional practice, and to refuse to fill such as the pharmacist may reasonably suspect of not having been so issued; (3) by compelling physicians to keep records of every dose of any narcotic dispensed by them, except such as may be dispensed in emergency cases; (4) by forbidding everywhere the ambulatory treatment of narcotic addicts; (5) by requiring physicians to keep records of all purchases of so-called exempt narcotic preparations; (6) by denying registration for a period of from 1 to 2 years to any physician convicted of any violation of the Harrison Narcotic Act."

Any collector of internal revenue, if this bill is enacted, must refuse to register under the Harrison Narcotic Act any narcotic addict. No preliminary notice and hearing are required. No grace is granted the unfortunate addict undergoing treatment in the hope of cure. Discretion is not allowed the collector. A narcotic addict can not register, and the collector must act on such evidence as he has. The physician refused registration is left to redress in court, with all the publicity and loss of professional prestige which that procedure entails.

The law of many states already provides that licenses to practice medicine may be revoked if the licensee is a narcotic addict. The Treasury Department presumably has knowledge of addicts holding such licenses, or it would not have asked the right to refuse registration to such persons. Its field officers, however, instead of being charged with the duty of initiating action before state licensing boards looking toward the revocation of such licenses, are expressly instructed not to do so. That the disclosure of the information they possess is not unlawful is shown by the fact that they may disclose it on request of a state licensing board. But the Treasury Department keeps these boards in darkness.

Why it thus refuses to avail itself of existing agencies effectually to bar narcotic addicts from practice, while it seeks authority to accomplish the same end to a limited extent through this legislation, is difficult to understand. The only guess that can be hazarded is that while the evidence of addiction in possession of the Treasury Department may satisfy some lay collector of internal revenue, vested with arbitrary power, as to the habits of would-be registrants, it would be of doubtful value if submitted to an impartial tribunal of physicians, when the registrant could introduce evidence on his own behalf.

The fact that Congress may not have authority to confer on the Treasury Department the power it here seeks does not seem to have occurred to those who drafted this bill. To determine who is and who is not fit to prescribe, administer and dispense narcotic drugs is to regulate the practice of medicine whether that determination is based on supposed narcotic addiction or on any other grounds; and the regulation of the practice of medicine within a state is beyond the power of Congress.

Every prescription issued by a physician for a narcotic drug will be subject to review by any pharmacist who may be called on to fill it, if the pending bill is passed. If there are present "circumstances from which the dealer might reasonably deduce that the prescription was not issued by the physician, dentist or veterinary surgeon in the course of his professional practice only", the pharmacist can not lawfully fill it. It is not necessary that the pharmacist actually deduce that the prescription was not issued in the course of professional practice; it is sufficient that he might reasonably do so. What constitutes "the course of professional practice only", the bill does not state. It presumes apparently that any pharmacist can determine in his pharmacy what took place in the sickroom or in the physician's office, and that he is sufficiently acquainted with the normal course of professional practice to be entrusted safely with statutory authority to refuse to any sick person medicine that the attending physician has prescribed.

The pending bill provides that every physician shall keep a record of all narcotic drugs he dispenses or distributes, no matter how small the amount may be, except in emergency cases. The law now does not require the physician to keep a record of the narcotic drugs he dispenses or distributes in the course of his professional practice to patients on whom he is in personal attendance, except the so-called exempt narcotic preparations. The Treasury Department, it is true, undertook at one time by regulation to require physicians to keep records of narcotic drugs dispensed to office patients. The United States Circuit Court of Appeals, Eighth Circuit, however, April 14, 1922, denied the right of the department to impose any such requirement (*Hurwitz v. United States*, 280 Fed. Rep. 109).

A physician can not, if the pending bill is enacted, dispense or distribute narcotic drugs pursuant to the so-called ambulatory treatment of narcotic drug addiction. Here again, apparently, the proponents of this bill have overlooked the right of each state to regulate the practice of medicine within its own borders. If the federal government can through its taxing power determine who may and who may not prescribe narcotic drugs, by eliminating narcotic addicts or otherwise, it may in like manner determine who may and who may not prescribe drugs of any

other kind. If, under its taxing power, the federal government can determine how narcotic addiction shall not be treated in the states, it may in like manner determine how every other disease may and may not be treated. If, then, the federal government can tell the people of the states who shall and who shall not treat them, and how they may and how they may not be treated, our state medical practice acts may soon be superseded by federal statutes.

Physicians who dispense the so-called exempt narcotic preparations must, if this bill is enacted, keep records of all purchases of such preparations, in addition to the records of sales, exchanges and gifts, which they are now required to keep. The additional burden of keeping a record of purchases may not be great. It may well be asked, however, what good is to be accomplished by such a record so long as the law allows any one to buy the exempt preparations without physicians' prescriptions and without identification.

Probably the most objectionable feature in the pending bill is the provision that any physician convicted of having violated any of its terms or any provisions of the Harrison Narcotic Act as it now stands will be absolutely denied registration for a period of 1 year from the first day of July next following the date of such conviction. This is in addition to the penalties now authorized by law, a fine not exceeding \$2000, imprisonment not exceeding 5 years, or both, in the discretion of the court. Fine and imprisonment are discretionary. The refusal of registration is not. If a physician overlooks the renewal of his registration on or before July 1, and without reregistration prescribes a narcotic on the following day, he has violated the Harrison Narcotic Act. If some narcotic field officer prosecutes the physician for this lapse, the physician may be convicted. The court may impose a minimum fine, or even suspend sentence. But under the proposed law, registration could not be granted to that physician for from 1 to 2 years after conviction. This proposed deprivation of the right to prescribe narcotics for from 1 to 2 years has greater significance than appears on the surface. It would vest in the Treasury Department almost unlimited power to force compromises of cases by physicians supposed by the department to have violated the law, no matter how flimsy the evidence of such violation might be. Physicians threatened with prosecutions and informed as to the uncertainties of court procedure, rather than face the possibilities of conviction, of deprivation of the right to use narcotic drugs in their practices for a year or 2, would readily pay large amounts to the Treasury Department by way of compromise, as is authorized by law. By so doing they would avoid the possibility of conviction and the loss of the right to use narcotics. And the Treasury Department would thus avoid the necessity of having to prove its cases in court to the satisfaction of impartial juries.

On the whole, this legislation seems to have been conceived in disregard of the fact that the "certain points which have been raised in certain courts to the disadvantage of the government" have been based on the constitution, which an act of Congress can not alter. It seems to disregard the fact that the keeping of records by physicians will not automatically enforce the Harrison Narcotic Act, but that it can be enforced only through the energy and intelligence of the officers and employees of the Treasury De-



partment assigned to that duty. It seems to disregard the fact that registrants who would unlawfully dispense or administer narcotic drugs would without compunction falsify their records. The medical profession yields to no class in its willingness to submit to burdens calculated to diminish narcotic drug addiction. Evidence is not available, however, to show that the burdens proposed by this bill would do so. Until such evidence is forthcoming, the medical profession may be expected to oppose the enactment of this bill.

State medical associations, county medical societies, and physicians may well communicate their views with respect to this bill to the President, the Secretary of the Treasury, the Committee on Finance of the Senate, and the Committee on Ways and Means of the House of Representatives, and to their respective senators and representatives.

## Current Events.

### TESTIMONIAL DINNER TO DR. NORTON L. WILSON.

Upon the occasion of his retirement from the presidency of the Staff of the Elizabeth General Hospital, Dr. Norton L. Wilson was the guest of honor as a surprise testimonial dinner Saturday evening, November 20, at the Waldorf-Astoria Hotel, New York, by fifty of his colleagues. Dr. Wilson this month reached his sixty-fifth birthday anniversary, at which time active service on the hospital staff ceases under a ruling of the institution.

Dr. James S. Green was toastmaster, and Dr. Arthur Stern presented to Dr. Wilson a Hamilton "Masterpiece" watch, engraved with a tribute from the doctors with whom he had been associated. Testimonial speeches, lauding Dr. Wilson's works in the profession, his relations with other physicians with whom he dealt, his scientific achievements, his personal character and the high reputation he has attained as evidenced by the offices which he has held, were made by Drs. Green, Stern, Wells P. Eagleton, of Newark; Alvin R. Eaton, Stephen T. Quinn, Charles H. Schlichter, Michael Vinciguerra, Otto Wagner, George T. Banker, Irving Lerman, Z. Lawrence Griesemer, Milton A. Shangle, Jacob Reiner and others.

Dr. Wilson was taken by surprise, having gone to New York with a small company of doctors under the impression that he was to attend a dinner and theatre party. Not until he stepped into the dining-room did he suspect the nature of the gathering. He was affected and responded to the presentation with difficulty. He declared that to his colleagues belonged the credit for any degree of excellence to which the hospital staff had attained, and thanked them warmly for the honor done him.

Dr. Wilson concludes forty-three years of service at the hospital, which he entered in 1883, while still a student in Bellevue Hospital Medical College. He acted as house physician from May to October, 1883. On his graduation in March, 1884, he was appointed to the dispensary staff and in 1887 was made a visiting physician, a position he held until 1889. He then was designated the first attending physician in the new department of ophthalmology, otology, and laryngology, which he helped to organize. Previous to the founding of the department, Dr. Wilson had been doing his work in the dispensary and

in the hospital in addition to his duties as attending physician. In 1905 the late Dr. Alonzo Pettit, owing to poor health asked to be relieved as attending surgeon and resigned from the staff, of which he had been president. Dr. Wilson was named his successor, and served ever since.

Among the offices he has held are the presidencies of the Union County Medical and Clinical Societies, and of the New Jersey State Medical Society. He now is the chairman of the board of trustees of the State body. He was head of the medical advisory board for Union County during the World War, and is now chairman of the board of censors for the Union County Medical Society. Other professional connections are his membership in the American Medical Association, in the American Laryngological, Rhinological and Otological Society, and the New York Academy of Medicine. He is a fellow of the American College of Surgeons.

### Watch Engraved.

The watch presented to Dr. Wilson was engraved as follows:

"Presented to Norton L. Wilson, M. D., by his colleagues of the staffs of the Elizabeth General Hospital and Dispensary upon his retirement from active service on the attending staff, November 20, 1926. Verum amicum qui intuetur, exemplar aliquod intuetur sui." The Latin text is from Cicero's essay on friendship, and may freely be translated, "He who looks upon a true friend, looks as it were on a sort of image of himself".

Saturday evening after Dr. Wilson had left home, a box of flowers was delivered to Mrs. Wilson, with the explanation of what had been planned for the evening. The committee in charge of arrangements was headed by Dr. Schlichter, and included Dr. Horace R. Livengood and Dr. Eaton.

Others present were:

Drs. Edgar Oppenheimer, of New York; George W. H. Horre, Harry Bloch, Emil Stein, John E. Runnels, of New Providence; Henry B. Orton, of Newark; Thomas J. Walsh, R. M. Nitoli, P. duBois Bunting, S. Franklin Wade, A. R. Casilli, Joseph Funk, George W. Strickland, George Knauer, Charles F. Jones, G. S. Laird, of Westfield; Friend B. Gilpin, of Cranford; Frank A. Williams, S. A. Oleynick, Herbert Vogel, Thomas Prout, of Summit; Frank H. Warneke, Joseph W. Dennin, F. W. Sell, Christopher A. Brokaw, Isadore Stein, Alfred E. Oakes, Lawrence G. Beisler, of Hillside; Thomas F. Higgins, Anthony W. Lamy, Sherwin B. Haseltine, G. A. Seymour, L. C. Victor du Busc and Julius Gerendasy.

### A SOLILOQUY.

The following contribution to the gaiety of nations came from one of our members who has recently suffered from the distressing calamity mentioned last in his poetic effusion, and the fact that he could compose verse at such a time that he is, at least, not a quitter.

"If two little lumps can give you the dumps,  
Tucked away with care in a neat little lair;  
And two little corns, like cute budding horns,  
Project from your toes like thorns on a rose;  
And one little sty on the lid of your eye  
Makes the world awry and a great big sigh;  
A boil on your nose will surely disclose  
You're a saint or a sinner, a quitter or winner."

E. S. Corson, Bridgeton, New Jersey.

## County Society Reports.

### ATLANTIC COUNTY.

Joseph H. Marcus, M. D., Reporter.

The stated monthly meeting of the Atlantic County Medical Society was held at the Hotel Chalfonte, Friday, November 18, 1926. The meeting was called to order by the President, Dr. D. Ward Scanlan.

The scientific program was inaugurated by Dr. W. Hersey Thomas, Professor of Genito-Urinary Surgery at Temple Medical College, Philadelphia, his subject being "Chronic Urinary Obstruction". Dr. Randle C. Rosenberger, Professor of Hygiene and Bacteriology at Jefferson College, concluded the program with his topic, "Infections of the Heart".

Dr. Thomas, discussing chronic urinary obstruction, feels that there is existing at present insufficient time and opportunity in the various institutions for stressing and teaching the importance of this subject, unlike conditions such as acute and chronic intestinal obstruction and acute urinary obstruction, all of which states are well discussed and diagnosed with more or less ease, while in the chronic type of urinary obstruction the diagnosis is not infrequently missed. The speaker stressed the importance of observing phimotic obstruction in the newborn and in the stage of infancy, and that one should not overlook a small meatus as this condition is quite easily corrected. It is quite important to have the patient urinate in the presence, of the physician, as the character of the stream very often aids in diagnosis. As a rule, this procedure is not advisable upon the patient's first visit, because there is a certain amount of embarrassment, which disappears on following visits. The author stated that the results on the kidney were the same, regardless of the type of urinary obstruction, and not infrequently a chronic urinary obstruction can simulate a chronic nephritis, and no laboratory test can differentiate these conditions.

Dr. Thomas divided the causes of chronic urinary obstruction into those situated above and those below the bladder. The common infravesicular causes are phimosis, small meatus, stricture of the urethra, and enlarged prostate gland. In these conditions, hypertrophy of the bladder will eventually occur, but the urinary stream is well ejected with force as long as the bladder retains its muscular tone. The sequence of findings are dilation of the ureter, then the pelvis of the kidney is involved mechanically, followed by hydronephrosis; at this time, the circulatory element enters into the picture, with resultant atrophy of the kidney and an infected pyelonephritis. In obstruction below the bladder, the bladder saves the patient, presenting functional symptoms for a time, and at this stage the speaker stressed the value of early treatment, which in most instances will be provocative of splendid results. In obstruction above the bladder (supravesicular anatomic changes promptly occur, but the symptoms in the beginning are not very marked. In an examination of the genital organs, don't overlook searching for para-urethral sinuses in the vicinity of the meatus. The most common types presenting chronic urinary obstruction are: (1) Stricture; (2) prostatic enlargement.

(1) Stricture. Dr. Thomas stated that this condition is prevalent in 85% of those patients who have been infected with gonorrhea, making

it a necessary and invaluable procedure to treat properly the terminal stage of this widely spread venereal disease. In the treatment, the stage of decline is most important and the instrument of choice is a urethral sound. He cautioned the physician in using the proper technic and especially in cultivating a gentleness in this procedure. Dr. Thomas' dictum is that a patient should never be discharged until sounds have been passed. It is advisable to discuss with the patient in a thorough manner the exact situation of this condition with its frequent disastrous end-results if the patient is not coöperative; as is obvious to all, the preventive treatment is most important. In the treatment of stricture, Dr. Thomas advocates gradual dilation, which he feels, surpasses all other methods; and even when surgical interference has been instituted the sounds, nevertheless, should be passed at stated intervals, following the operation. As a rule, the old strictures present themselves 4 to 6 years after infection.

(2) Prostatic enlargement. The speaker maintained that a prostatectomy should never be an emergency procedure, and the necessary clinical and laboratory procedures should at all times be instituted before operation. This statement holds true, regarding stricture as well. In quoting Hunt's statistics, from the Mayo Clinic, Dr. Thomas said: Of a series of 437 cases treated by preliminary cystotomy, there was a resultant mortality of 7.5%. In a second series that embodied 666 cases in good condition and in which no preparation was necessary, there was a mortality of 6.6%. In a third series of 680 cases in which the patient was prepared and the kidney function stabilized, the resultant mortality was 3.2%. The fatal results produced by pulmonary embolism should always be kept in mind. In 113 deaths in a series of prostatic operations at the Mayo clinic there were 13 due to pulmonary embolus, of which number 11 had been considered good surgical risks. In his closing remarks, he maintained that it was always advisable in emptying the bladder with a catheter in retention caused by obstruction, to leave some contents remaining within, and to empty the bladder gradually.

Dr. Thomas' subject was discussed by Drs. Karl M. Scott and Edgar Darnall.

The program was continued by Dr. Randle C. Rosenberger, who stated clearly and emphatically that we owe it to the public and to ourselves and colleagues, to make a more accurate diagnosis in the type of case of which we read so often in the press as "Heart Failure", "Acute Indigestion", etc. He further urged a more specific character of diagnosis and especially emphasized the types of heart disease caused by the toxins of diphtheria, syphilis, and the acute bacterial disease. We should constantly bear in mind the end-results caused by focal infections, infected tonsils, rheumatism and chorea. All of these above mentioned conditions should at all times be kept in mind as these toxins not infrequently produce a degenerative or necrotic change in the heart muscle, thus making obvious the importance of considering the diseases of childhood when called upon to attend a patient suffering from certain manifestations of the heart.

In considering the pathology of heart lesions, Dr. Rosenberger includes these structures: The myocardium, the valves, the mural endocardium and pericardium.

The myocardium, as a rule, is infected as a result of pyemia or by infective emboli; by exten-



sion of pyogenic valvular lesion and infection directly from the pericardium, diphtheria, scarlet fever and typhoid will often give rise to necrosis or hyaline degeneration of the heart muscle; less rarely from tuberculosis.

Syphilis of the heart muscle may be evident in the formation of gummas, which may be small or large, and also may manifest itself as a disease of the small vessels of the heart, leading to occlusion of the vessels and subsequent degenerative changes in the myocardium.

Actinomycosis has been noted in the myocardium but it is rare. It is not uncommon to have a bacterial infection as a result of the lodging of pyogenic bacteria. Dr. Rosenberger maintains that acute articular rheumatism and chorea are the causes in the majority of cases, of simple endocarditis and further stated that rheumatism is of an infective origin, though a specific organism has not been isolated. He mentioned the experiments of Poynton and Payne and also of Walker, in which they isolated in a number of cases of this infection an organism and injected it intravenously into rabbits, in due time presenting joint lesions and valvular vegetations.

Streptococci have also been isolated. In the infective form of the disease, bacteria, gaining a foothold upon the valve, immediately multiply, and in a short time a lesion is formed. When portions of these valve leaflets or growths thereon are swept off into the circulation the result is pyemia and possibly death. During the progress of infection, if a blood culture is made, the causative organism can occasionally be isolated. Dr. Rosenberger inoculates the blood obtained on agar or mixes the blood with previously melted agar at a temperature of 40 to 42° C. When there are not bacterial growths within 24 hours, he deems it necessary to keep the preparation under observation for a number of days until a positive or negative result is recorded. He stated that the mitral valve is the one most commonly involved. Regarding the subacute form of endocarditis, he quotes Libman as stating that the streptococcus viridans is responsible for 95% of all such cases, while the bacillus of influenza is responsible for the remaining 5%.

Rosenberger feels that the gonococcus may produce subacute endocarditis. The well known focal infections he mentioned as, infected tonsils, mastoid disease, broken down glands, osteomyelitis, and gonorrhea. In 327 cases of infective endocarditis, 11% were due to the gonococcus.

Infective endocarditis also may be caused by the pneumococcus, either as a complication of pneumonia or independent of pulmonary disease. It is a well known fact that this organism is found in a large number of primary infections, such as peritonitis, meningitis, pseudomembranous angina and conjunctivitis. When due to the pneumococcus the subsequent endocarditis is severe and generally runs a rapid course.

Organisms less commonly met with than those already mentioned comprise the *Bacillus tuberculosis*, *Bacillus pyocyaneus*, *meningococcus*, *Bacillus influenza*, *Bacillus diphtheria* and *Micrococcus zymogenes*. The colon bacillus may occasionally be found but usually represents a terminal infection.

In summing up, therefore, the bacteriology of diseases of the heart the most outstanding features are the involvement especially of the valvular endocardium by direct implantation of bacteria; the excessive degree of vegetation formation; the likelihood of infective or septic emboli; development of pyemia and thrombosis

of the coronary or other arteries; extension of the infective process to the myocardium; destruction of the heart wall by pyogenic process; presence in the blood stream and vegetation of the causative organism; and making the diagnosis by blood culture imperative in suspected or suspicious cases of this type of infection.

Dr. Rosenberger's presentation was discussed by Dr. R. A. Kilduffe, Director of the Atlantic City Hospital Laboratories, and Dr. W. J. Carrington. A rising vote of thanks was tendered to the 2 speakers for their practical presentations, which were replete with valuable suggestions.

Following the scientific part of the meeting, the business procedure of the society was initiated. Dr. C. B. Kaighn, secretary pro-tem, read the minutes of the previous meeting, which were approved. Drs. Charles Bates, and W. B. Stewart, Jr., were accepted as members to the county medical society. Dr. J. A. Bradley was transferred from the Philadelphia County Medical Society, and W. B. Olmstead from the Mercer County Medical Society; both physicians being in good standing in their respective societies were admitted to the Atlantic County Medical Society.

Dr. W. J. Carrington offered an amendment to the constitution, which has for its purpose "that the officers be elected at the November meeting, but commence their official duties with the January meeting; that the president be empowered to appoint a nominating committee, which committee shall present before the members the candidates for office; that other nominations for officers may be made by members irrelative of the nominating committee's report; that because of the large number of prospective candidates for the presidency in the future, the term of this office be limited to 1 year."

Dr. W. Blair Stewart, as Chairman of the Public Health and Legislation Committee, with Drs. E. H. Harvey and W. J. Carrington, recounted the past activities of this body. Dr. Stewart's report, which embodied a period of 15 years, was extremely interesting and afforded the members a splendid visual picture of the extreme activity of this highly important body.

The election of officers followed; President, Charles B. Kaighn; Vice-President, Charles Cunningham; Secretary, Edward Uzzell; Reporter, Harold S. Davidson; Annual Delegates—John F. Massey, Leland Madden, E. L. Harley, J. H. Marcus, Norman Quinn; Alternate Delegates—H. S. Davidson, John Pennington, Karl Scott, S. L. Winn and J. Stalberg.

Dr. Joseph H. Marcus extended the appreciative thanks of the society to its President, Dr. D. Ward Scanlan, who has served in a most laudable manner and who was instrumental in obtaining highly educational and instructive presentations for the society. Dr. Scanlan replied that the task allotted him was a thoroughly enjoyable one and he was very happy in being able to serve.

Dr. Edgar Darnall presented his annual report as Chairman of the Library Committee.

Following a vote of thanks by members of the society to the Chalfonte Hotel for courtesies extended, the meeting adjourned.

#### Atlantic City Hospital Staff

Joseph H. Marcus, M. D., Secretary.

The monthly meeting of the Atlantic City Hospital Staff was held in the auditorium of the Nurses' Home on November 19, 1926. The meet-

ing was called to order by Dr. Richard Bew, President. The members in attendance were: Drs. Bew, Stewart, Jr., Filer, Chew, Silvers, Senseman, Andrews, Barbash, Kilduffe, Harley, Charlton, Winn, Reyner, Rosenberger, Marcus, Davidson, Scanlan, Carrington, Ratcliffe, McGeehan, Poland, Marvel, Jr., Hyman, Ireland, Subin, Shivers, Quinn, Uzzell, Rosenblatt, Kaighn, Brown, Conaway, and Walker.

The minutes of the previous meeting were read and approved. Dr. Theodore Senseman, submitting his report for the Training School Committee, stated that there has been a marked increase in the number of students, and that the quality and character of the pupils ranked very high.

Dr. Senseman presented the following motion, which was unanimously adopted: Due to indiscriminate parking and severe congestion on Ohio between Atlantic and Pacific Avenues, certain hardships are constantly experienced by members of the Hospital Staff in finding nearby and convenient locations for their automobiles. It is the earnest desire of this Staff that certain space be reserved for at least 12 automobiles, such a designated area to be marked specifically for physicians, in whatever manner you deem best and in the immediate vicinity of the main entrance on Ohio Avenue.

The secretary was instructed to present this resolution, in letter form, to the Mayor. Dispensing with other routine business procedures and committee reports, the Scientific Program was instituted.

Dr. Robert A. Kilduffe, Director of the Atlantic City Hospital Laboratories, prefaced his talk on "Chemotherapy of Streptococemia" by stating that in recent years a great deal of study has been directed toward an efficient method for the treatment of blood stream infection by the intravenous administration of various dye compounds. He directed this discussion particularly to mercurochrome—220 soluble, a product formed by the combination of mercury and a fluorescent dye. Conflicting reports exist at the present time regarding the use of this drug.

Quoting Walker's experience, he finds no increase in bactericidal activity toward the colon bacillus in mercurochrome solution as strong as 1:400, but that concentrations of 1:200 cause the bactericidal activity of the blood to be destroyed.

Dr. Kilduffe seemed certain of the following: (1) Mercurochrome may be bactericidal for certain bacteria. (2) For certain other organisms mercurochrome may be bacteriostatic; capable of inhibiting their growth without necessarily encompassing their destruction. (3) Chemotherapy can not be disassociated from the possibility of chemopathology, which may be cumulative, dangerous, and even fatal. He concisely and briefly reviewed the most important experimental works of Young, Scott and Hill; Hill and Bidgood; St. George; Corper and Churchman.

The indications for usage and the ultimate results from the use of dye therapy, especially mercurochrome, were stressed by the author as depending upon 4 factors: (a) The virulence of the invading organism; (b) accessibility to treatment of their source, e.g. focus of infection; (c) resistance of the patient; (d) the site and gravity of the secondary lesions in various tissues or organs resulting from bacterial localization.

In the report of the following case, Dr. Kilduffe kept in mind the above mentioned factors, and endeavored to determine the frequency and amount of dye given by a study of the blood count, in order to elicit information not made

obvious in the clinical picture. This case report was made possible by the courtesy of Dr. Theodore Senseman and Dr. James H. Mason. The history is as follows:

Truck driver, aged 40 was struck by an automobile on March 13, 1926. He was admitted to the hospital suffering from shock and complaining of pain and loss of function in the left leg and thigh. Physical examination revealed a compound, comminuted fracture of the left femur; small puncture wound in the posterior aspect of the left thigh; with multiple abrasions. The roentgenogram showed an "oblique fracture of the femur just above the condyle, with a step fracture about 3 in. above the knee". Another view taken on March 15, demonstrated a "dish-ing" of the femur, the middle fragments being above the upper and lower fragments, with marked comminution of all. The fracture was again reduced, the leg placed on double inclined plane, but due to the difficulty experienced in maintaining good position, an open reduction was performed on March 25, and a Lane plate inserted.

March 27. Sudden rise of temperature to 101.5° F. without accompanying symptoms. March 28. Temperature normal, patient complaining of much pain in the leg, which has been more or less constant. April 10. Considerable amount of drainage from the wound, temperature rising and patient complaining of pain and drowsiness. April 16. Three weeks after operation. Temperature suddenly arose to 103° accompanied by a chill. Large amount of seropurulent drainage. Temperature next few days ranged from 99° to 102°. Restless, irritable, no appetite.

April 21. Temperature 105°, pain in the leg not as marked, patient more toxic, drainage greatly reduced.

April 22. Temperature range 105° to 106°; patient delirious. Leukocytes 16,400; neutrophils 80%; leukocytic index 6.8. Blood culture revealed a nonhemolytic streptococcus.

April 23. Dr. Kilduffe first saw patient. Temperature range 103° to 104°; delirious, pallid, covered with a clammy sweat, in very poor condition. Patient was in a desperate state and prognosis grave. It was decided to use mercurochrome—220 soluble. Dr. Kilduffe determined treatment with a definite departure, in view of the strength and frequency usually advocated, believing that an attempt to sterilize the blood stream by chemotherapy, constitutes only a part of the story and that sudden, massive sterilization is not in itself necessarily desirable. The object in view to produce, if possible, a definite degree of bacteriostasis, rather than bacteriolysis, and to produce a minimum of reaction. Accordingly, 5 c.c. of 1% mercurochrome was injected intravenously, immediately following the taking of a blood culture. Three hours later the patient had a severe chill, temperature rising to 103°; April 24. At 4 a. m. the temperature fell to 97°F., patient sweating profusely, pulse weak, general condition that of collapse. Dr. Kilduffe maintained that this sequence of events was due to the liberation and absorption of streptococcal endotoxin. April 24, 11 a. m. The general appearance of the patient was quite startling; his mind was clear and he was reading a newspaper. Temperature at 9 a. m. was 99° but soon commenced to rise. At 11:30 a. m. blood culture was taken and 5 c.c. of 0.5% mercurochrome was injected through the same needle. By midnight the temperature had risen



to 105° accompanied by transient spells of delirium and numerous chills.

April 25. At 6 a. m. temperature had fallen to 100°, accompanied by profuse sweating. Leukocytes 15,150, neutrophils 97% and a leukocytic index of 32.5. April 26, leukocytes 11,250, neutrophils 84%, leukocytic index 5. The drainage from the wound was scanty, seropurulent and upon culture, nonhemolytic streptococci, staphylococcus aureus, and bacilli of Friedlander type were found. The wound was frequently irrigated with mercurochrome-acetone solution, diluted to half strength.

April 27. Leukocyte index 3.6; leukocytes 11,276; neutrophils 76%. Temperature range 99° to 101° F. April 28. Leukocytes 12,100; neutrophils 73%; and leukocytic index 3. Mental condition somewhat hazy, general condition good, temperature 99°. In the afternoon, temperature arose to 103°. Leukocytes at this time 12,650; neutrophils 86%; leukocytic index 6.6. Intravenous injection of 3.5 c.c. of 0.5% mercurochrome were given. Few hours later temperature rose to 104° and dropped to 97.5° at 5 a. m. the following morning. Blood culture at this time gave 2 colonies of streptococci. April 29. Leukocytes 12,250; neutrophils 69%; leukocytic index 2.6. Blood culture was sterile, general condition remained satisfactory. Free drainage from the wound and Carel-Dakin drip was inserted.

May 5. Culture from wound showed few staphylococci. General progress very satisfactory. May 13. At 5:30 a. m. and at 2 p. m. patient had a chill. Temperature 103.2° and 3.5 c.c. of 0.5% mercurochrome were injected intravenously after taking a blood culture. Four days later streptococci were recovered in small numbers. On the same day, 8 hour after the injection, temperature was 98° and on the following day, blood count was leukocytes 10,450, neutrophils 87%; with a leukocytic index of 7. May 15. Leukocytes 9300; neutrophils 74%; leukocytic index 2.9. Drainage very slight and Dakin solution replaced by a saline drip. Roentgenographic examination at this time showed extensive erosion of the femur in the neighborhood of the plate, the upper screw of which appeared to have become loosened. The lower portion of the upper fragment showed an area of absorption suggesting the presence of a pocket of infection.

June 8. General condition good; plate removed under gas anesthesia; no pockets of infection found. The wound healed nicely and the patient discharged June 26, and is at the present time at work with very good functional results. Dr. Kilduffe emphasized that the total volume of mercurochrome injected was 17 c.c., the total mercurochrome content being 0.11 gm.; all quantities, being much below the amounts usually given in a single dose. He further states that the frequency of dosage was determined by the leukocytic as well as the clinical picture as indicating the progress of the battle between the patient and his bacterial antagonists.

Dr. Kilduffe formulated the following conclusions as interpreted by him from his experience.

(1) The treatment of bacteremia by the intravenous injection of mercurochrome—220 soluble should not be directed solely toward the immediate production of a therapia sterilans magna.

(2) The bacteriostatic effect of the drug is of equal importance with its bacterial activity.

(3) From these premises it follows that the strength and amount of solution injected are not

to be arbitrarily selected on the basis of the degree of bactericidal effect it may be possible to produce but should be determined by the clinical and bacteriologic picture of the particular case.

(4) The frequency of dosage should be determined by the leukocytic index as indicating the progress of the battle between the patient and the invading bacteria.

(5) Massive and frequent intravenous doses of mercurochrome—220 soluble are not necessary as a routine method of treatment.

(6) The sudden absorption of massive doses of endotoxin as a result of sudden and massive bacterial destruction in the blood stream possesses elements of danger and should be avoided.

(7) The production of some degree of reaction is to be sought for because of the therapeutic value of protein shock.

(8) It is possible to sterilize the blood stream in the presence of streptococcemia by the injection of small amounts of mercurochrome at irregular intervals, the sterilization being probably due to the opportunity afforded by the induced bacteriostasis for the mobilization of the resisting powers of the patient rather than to the bactericidal effect of the drug.

(9) Treatment of an accessible focus of infection is an important element and should not be neglected.

(10) In view of the above premises both the strength of the dose and the frequency of administration of mercurochrome solutions should be modified.

#### Discussions.

Dr. W. J. G. Carrington questioned the use of chemotherapy in puerperal sepsis, briefly stating his experience with quinin salvarsan, formalin and urotropin.

Dr. Samuel Barbash has never used chemotherapy in the smaller doses, as outlined by Dr. Kilduffe. His previous experiences were with large doses in which mercurochrome was used. The conditions were lobar pneumonia, bronchopneumonia, and acute articular rheumatism. His opinion is that beneficial results were obtained by the use of chemotherapy and he commended Dr. Kilduffe for his scientific and accurate observations.

Dr. Walt P. Conaway reported a case of general septic infection following a pelvic infection, in which no results were obtained by the use of chemotherapy, probably due to the fact that the patient was in such a desperate condition.

Dr. Harold S. Davidson stated that conclusions should be drawn not from a few cases, but from scientific observations and deductions resulting from a large number of cases.

Dr. Clarence L. Andrews. In a case of pericarditis with infection of the blood stream, there was temporary benefit derived from chemotherapy. In cases of severe endocarditis, he felt that the usual sequence of events very often typify a reinfection from a primary focus.

Dr. W. B. Stewart, Jr., stated that Dr. Young, of Baltimore, is now inclined to favor the smaller dosage, and that the bacteriostatic effect is what is hoped for primarily.

Dr. Theodore Senseman emphatically maintained that chemotherapy should be used by an expert and given with utmost precision, the use of chemotherapy being a highly specialized procedure.

Dr. Richard Bew recommended mercurochrome in smaller doses than formerly used. He emphasized the active treatment of the primary focus and that chemotherapy must be used

in a scrupulously careful manner; conclusions should be drawn only from a series of cases.

Dr. Kilduffe, in closing the discussions, again outlined briefly the true scope of the chemotherapy as set forth in the conclusions before mentioned. He again emphasized the importance of treating the patient as an individual, ascertaining the organism that it to be attacked; use chemotherapy early and not when the patient is on the verge of dissolution; trying to institute treatment when patient is able to respond. Never use drugs arbitrarily, but treat the infection and patient as distinct relative entities.

The program was continued by Dr. H. L. Harley, with the report of the Ophthalmologic Service extending from May to October, 1926. The total number of cases treated were 168, this smaller number than under normal conditions being due to the rebuilding of the hospital. Speaking of punctured wounds of the globe, there were 9 in number, 4 of which were not enucleated; the remaining 5 were so badly traumatized that they required enucleation. The following report of quinin amaurosis was presented. In an exhaustive search of the literature Dr. Harley concluded that blindness due to quinin poisoning is very unusual and most frequently presents total blindness. There are some 40 drugs, producing toxic amblyopias, some of which are: tobacco, lead, carbon-dioxid, coffee, tea, mercury, salvarsan (old types) optochin, carbon bisulphide.

Patient admitted January, 1926, complaining of sudden and complete loss of vision. Four days after admission, examination of the eye revealed very small vessels, slight haze of the retina, pale disk, in conjunction with a diminution of the light sense and color sense. Six months later the salient features were, restriction of the field of vision, atrophy of the nerve ends, good central vision, 20/20 in each eye.

September 22. Patient unable to see. Hot baths and potassium iodide in large doses, resulted in slight return of vision. It was later learned that 120 gr. of quinin had been taken with suicidal attempt. In discussing the ophthalmoscopic signs Dr. Harley stated that there may be no signs present for the first few days after which the characteristic signs, as mentioned above, may be noted; in addition a cherry red spot in the macula may be observed. In discussing the differential diagnosis between methyl alcohol and quinin poisoning the history of poisoning, odor of the breath, suddenness of blindness, formaldehyde and formic acid in the urine, all favor a diagnosis of alcohol toxicity.

#### Discussion.

Dr. Clarence L. Andrews stressed the importance of the urinary findings, and a careful history being very important in arriving at differential diagnosis. He outlined in brief a series of 9 cases of methyl alcohol poisoning in which the following treatment was instituted, with recoveries in all cases: Respiratory and cardiac stimulation, stomach lavage, and the administration of sodium bicarbonate by bowel, by mouth and intravenously. One case presented the clinical manifestations of neurosyphilis, which symptoms diminished in intensity and finally disappeared after thorough alkalization.

Dr. Theodore Senseman stressed the importance of careful interpretation in head injuries; felt that clinical manifestations of the patient were to be regared primarily in influencing surgical intervention.

Dr. Richard Bew outlined the treatment of 45 cases of methyl alcohol poisoning, which incidence of cases occurred shortly after the passing of the Volstead Act. In all cases the alkali treatment was given. Dr. Bew warned against using an excessive amount of sodium bicarbonate, as a more or less serious alkalosis can be produced.

#### BERGEN COUNTY.

H. B. Wolowitz, M. D., Reporter.

On November 9 the regular meeting of the Bergen County Society was held at the Hackensack Hospital, Dr. M. J. Sullivan presiding.

The transfer of Dr. Enrico Gnasso, Cliffside, from the Essex County Society was accepted.

Applications for membership were received from Drs. Bickner, Rutherford, and D'Agostin, Cliffside.

The speaker of the evening, Dr. Louis Carp, dealt with the "Diagnosis and Treatment of Branchial Fistula". A few notes follow:

Branchial fistulas are uncommon, as is shown by the fact that at the Presbyterian Hospital in New York there have been only 18 cases operated on and pathologically proven since 1915. All complete branchial fistulas open into the pharynx at one spot, the supratonsillar fossa. The external opening varies in position relative to the midline; it is dependent upon the growth of the second branchial arch in the embryo and may be anywhere from the mandible to the clavicle. In making a diagnosis it must at times be differentiated from a cold abscess. Aspirated fluid will show no mononuclears, as are found in T. B. glands; the latter show some degree of calcification so an x-ray may be of value. The passage of a probe or the injection of methylene-blue is helpful in complete fistula. In time there is a foul discharge into the pharynx due to infection of the tract.

A trick in operating on these cases is to dissect the tract almost to the pharynx, then insert a probe along the remaining sinus into the pharynx, tie the end of the sinus wall to the probe, and pull the probe through into the pharynx, thus inverting the sinus. All of the tract must be removed or a recurrence is had in about 6 months. Conservative treatment is useless. To actually determine a cure patients must be followed for several years. The reported cures after conservative methods were not followed up long enough.

Heredity plays a part in this condition, as is apparent in the case of a woman who had a right branchial fistula and whose daughter and the daughter's four children all had right branchial fistulas.

The tract usually secretes a glairy, mucoid fluid, though there may be no secretion. Continuous deglutition, as in nursing, the taking of hot drinks, fevers, alcohol, all may cause an increase in the amount of secretion. Two-thirds of the patients were females; 14 patients had cysts, 5 had fistulas. Whether the right or left side was involved was about even. Some are easy to remove, some very difficult especially if there has been inflammation, for then the tract becomes adherent to the large vessels in the neck and at times to the vagus. There is such a thing as a branchial ranula; there was 1 case in which a cyst of the neck connected with a ranula, forming a dumbbell shaped affair.

By request, Dr. Carp spoke about his recent



development in the treatment of carbuncles, the substance of which follows:

Red hot, spreading carbuncles, which surgeons agree should be incised, were taken in this work. The patient was given an anesthetic. Blood was drawn from a median basilic vein and immediately injected just beyond the areas of induration at points where the carbuncle seemed to be advancing; 3 to 5 injections were made, using up to about 75 c.c. of blood. There was immediate relief from pain. Spreading stopped. In a day or two the center began to soften, necrose, and the pus flowed out. The period of convalescence was greatly shortened, averaging 21 days in the cases followed from the time of injection to the time of complete healing. The resulting scars were much smaller and finer than is usual. Nothing but dry dressings were used in conjunction with this treatment. Only the one injection was given. This same treatment can probably also be used with success in erysipelas.

### The Medical Club of Hackensack.

Spencer T. Snedecor, M. D., Historian.

The Medical Club of Hackensack is a group of the younger physicians who have banded themselves together with under tenets expressed as follows:

(1) The purpose of the club shall be twofold; first, to extend the spirit of friendship among its members; secondly, to broaden their knowledge of medicine.

(2) Membership shall be limited to 15 members and no one over 40 years of age may be elected.

(3) Meetings shall be held twice a month, for dinner at 8:30 in the evening, at some club or restaurant where good food and a private room may be had.

(4) At each meeting a ten-minute paper shall be read by one of the members and opened for discussion by all.

In the course of the last 6 months we have had several meetings, each pleasanter and more enjoyable than the preceeding one, and a feeling of congeniality has noticeably grown. Our idea of gathering around the dinner table and swapping the best stories and incidents of the day to willing listeners is the foundation for the success of the Medical Club. Furthermore, we try to call each other by our first names and to insist on a full attendance.

We organized this club to fill a need of the younger doctors, not in opposition but as an adjunct to our county society. In our informal meetings opinions are crystallized and later brought to the attention of the older society. Some of the suggestions that we have discussed to bring before the meeting of the county society are: (1) To have symposiums on subjects of general interest. (2) To plan graduate education—by lectures and by clinics. (3) Periodic health examinations. (4) To educate the public on health matters by instructive publicity.

Among other topics of our frequent discussions are:

(1) Our hospital, its work and how to improve it.

(2) Our individual ambitions to follow some special field of work.

(3) Ethics among ourselves. We believe that

the intangible precepts called ethics can only be founded on friendship. For instance, when we are called upon to treat a patient that another physician has been attending, we will not tell the patient to notify our friend that he has been discharged and we shall be glad to treat the case, but we will tell the patient that our friend is an excellent doctor and has been giving them the best advice possible and that the patient should retain him. We believe that the friendship and coöperation of our fellows will be a large factor in our own success.

Dinner is passed by 10 o'clock and someone then reads a short paper. Usually, the topic consists of the history of a recent interesting case from the doctor's practice along with an abstract of the latest work on diagnosis and treatment of that condition. For instance, recently one of the doctors reported on an obstinate case of acute articular rheumatism with a review of the latest literature on therapy in rheumatic conditions, the feature of another monograph was "Medicine as Practiced in Hackensack 10 Years Ago and Now". A general wholehearted discussion of the paper, in which every one joins, is called off about 11 p. m.

At our last meeting, at the Oritani Club on November 3, Dr. Blake, of Riveredge, reported 2 similar cases of brain tumor, one recovering and the other autopsied.

Case 1. T. S., male, 47 years old. A large plethoric German, first seen March 23, 1926. His chief complaint was severe and continuous occipital headache. Other complaints were progressive weakness of the extremities, irregular vomiting, loss of weight and appetite, impaired taste, numbness of hands and feet, gastric distress and inability to maintain equilibrium. He was melancholy, morose and garrulous. The onset of his condition was slow and insidious, with increasing severity over a period of 4 months. He first noticed an inability to walk well, staggering from side to side and dragging his foot. Several times he fell, once hitting his head against a stone step. His bowels were constipated and urination frequent but without burning. Sleep was fitful and restless. Nothing seemed to relieve the occipital headache. Family and past history irrelevant.

Physical examination: Pupils equal and regular. Reaction slow to light and accommodation. Eye-grounds negative. Tongue heavily furred and breath very foul. Heart and lungs normal. Blood pressure, systolic 108, diastolic 74. No signs of arteriosclerosis. Abdomen negative except for moderate tenderness in epigastrium. Superficial reflexes normal. Tongue protruded in straight line. Knee jerks slightly diminished. No Babinski. Ataxic gait.

Tentative diagnoses: (1) Malignancy upper abdomen. (2) Locomotor ataxia. (3) Brain tumor.

Laboratory examinations: X-ray of intestinal tract negative. X-ray of head showed no abnormality. Urine negative. No blood in vomitus. Blood and spinal Wassermann negative. Spinal fluid not under pressure. Blood count within normal limits. Patient was hospitalized and stomach repeatedly washed out. Light diet. Bowels evacuated. Treatment symptomatic. K. I. 5 gr. t.i.d.

After a week of unimprovement, patient was seen by Dr. E. D. Friedman, of New York City, who diagnosed the condition as one of neoplasm

in the posterior fossa of cerebrum and rendered an unfavorable prognosis.

At the suggestion of Dr. R. Gilady, of Hackensack, who suspected a luetic diathesis, patient was given a course of neosalvarsan followed by mixed treatment. The headache gradually disappeared. Vomiting ceased. General improvement took place, with his sense of taste and weakness the slowest to respond. His right leg is still weak. His fingers and toes are somewhat numb but otherwise, after 8 months, he eats and sleeps normally, does a fair days work about his place, and is enjoying fairly good health. Present diagnosis: Gumma of brain.

Case 2. Female, aged 43, housewife. Weight 164. First seen February 18, 1926. Chief complaint was severe headache, both occipital and frontal. Other complaints were: Dizziness and fainting spells, with sharp pains on either side of the face at irregular intervals; vomiting occurred frequently soon after eating but sometimes without any apparent relation to meals.

Present illness: Condition began some 3 or 4 months ago, with insidious onset and gradually increasing severity. Patient continued to do housework but with frequent periods when she had to go to bed. Some of her many vague complaints were attributed to beginning menopause. Family and past history irrelevant.

Physical examination: Patient was a large, well muscled, well nourished individual who appeared somewhat older than her age would indicate. Pupils slightly sluggish. Reaction to light and accommodation apparently normal. There was a glassy look to the eyes and the eyeball appeared to rotate more than normal, giving her a sort of wild staring appearance. She seemed to tip her head abnormally backward in order to focus upon the object before her.

The patient was treated symptomatically and showed improvement with remissions. In June, during a period of improvement, patient took a trip to Europe. She returned in September reporting sickness most of the time while away. Her headache was much worse, the vomiting was aggravated and of a projectile character and she apparently was a very sick woman. She also was referred to Dr. E. D. Friedman, of New York City, who made a diagnosis of posterior fossa neoplasm. From his neurologic examination, Dr. Friedman reported sluggish pupils, bilateral papilledema, diminution of corneal reflexes, cerebellar tilting of the head and ataxia of gait and station. There were also some mental symptoms and twitching of the right upper extremity. Patient was referred to a New York hospital where an operation was attempted but the patient died on the table.

Autopsy report: The inner surface of the dura was studded with more than 25 smooth, white, rather hard tumors from 1 to 4 cm. thick. None of these tumors infiltrated the brain. In the right frontal region there was a large area, 4x7 cm., which was soft, friable and discolored, apparently neoplastic. The floor of the third ventricle was bulging.

Diagnosis: Multiple endothelioma of the dura with a large mass in the right frontal lobe.

#### BURLINGTON COUNTY.

R. I. Downs, M. D., Reporter.

A special meeting of the Burlington County Medical Society was called Wednesday, October 27, at 3 p. m., at the Burlington County Hos-

pital. There were 15 members present, with the President, B. K. Brick, in the chair. The visitors were Architect Richard Erskine, of Philadelphia, Dr. Goldwater, of New York, and Mrs. Hollingshead, the head nurse of Burlington County Hospital.

The purpose of the meeting was to endorse the architect's plans for the new Burlington County Hospital. These plans were submitted by the Advisory Board of Council after having been approved by Dr. Goldwater.

Dr. Longsdorf reviewed the work of the Advisory Board of Counsel consisting of Drs. Stokes, Marcy, Newcomb, Rogers, and Longsdorf. The plans were reviewed and discussed with suggestions, especially concerning the interns' quarters and position of operating rooms.

The motion of Dr. Darlington that the Society approve the plans of the new Burlington County Hospital as submitted by the architect, Richard Erskine, was passed, and the President and Secretary of the Society were authorized to sign the approval and forward it to the Chairman of the Building Committee, Mr. Alfred E. Darnell, of Medford.

#### CAMDEN COUNTY.

Grafton E. Day, M.D., Reporter.

A special combined meeting of the Camden County and Camden City Medical Societies was held at the Dispensary Building on Tuesday evening, November 9 at 9 p. m. This was the regular monthly meeting night of the City Society and as the County Society is to meet monthly in the future and the City Society but quarterly, the combined meeting was held at this time. The session opened with Dr. Alfred Cramer, President of the County Society, in the chair.

The paper of the evening was by Dr. William Stroud, of Philadelphia, who discussed "Cardiac Conditions" in a most interesting and decidedly helpful manner. Dr. Stroud's optimism is born of a conviction that comes from experience in this work. He spoke of congenital defects without clinical signs, when the patient may have a normal life expectancy; of acute cardiac inflammatory affections where a proliferative inflammation may be dangerous for 12 to 18 months after the acute inflammation subsides. The 3 favorable symptoms in this condition are normal pulse and temperature, gain in weight, and normal leukocytosis. Classification of cardiac cases is essential to the getting of a true picture of your case and to most intelligent prescribing for your patient.

Perpetuating the earning capacity of disabled heart cases, through bureaus for the physically handicapped, occupational therapy and vocational guidance was stressed by the speaker. The most essential matter in the treatment and prognosis of heart disease is study of the myocardial reserve of your patient. Dr. Stroud's graphic illustration of the effect of digitals will not soon be forgotten by his attentive hearers.

The paper was voted the thanks of the society and comment was heard that it was one of the best papers that our society has heard in recent years. We hope to publish the paper in the Journal. Dr. Ralph Hollingshead and Dr. Lewis discussed the paper.

Following the scientific session, the business of the society was conducted, the most important feature being the adoption of an amendment to the Constitution changing the meetings from



quarterly to monthly, and the appointment of a committee of 5, known as the Business Committee, to transact the business of the society and report the same to the society for its action.

Dr. Martin H. Collier, Superintendent of Lakeland Hospital, presented a member's card from the Luzerne County Medical Society, Pennsylvania, and elected to membership. Dr. Henry B. Dunham, Assistant Superintendent at Lakeland Hospital, was transferred from the Essex County Medical Society to the Camden County Medical Society.

Upon adjournment, a buffet luncheon was served.

### ESSEX COUNTY.

Wm. M. Rathgeber, M. D., Reporter.

The regular monthly meeting of the Essex County Medical Society was held on November 23, at 9 p. m., in the auditorium of the Academy of Medicine, 91 Lincoln Park, Newark. President Sanford Ferris presided over an attendance of about 150.

The following candidates were elected to membership in the Essex County Medical Society: Drs. A. Bengelsdorf, Irvin M. Bierman, Henry A. Brodtkin, Roscoe W. H. Buckner, Gibbs Chisholm, O. Denes, Ira Flax, Jacob L. Flax, J. Freinkel, Pasquale D. Gerardo, Meyer Levin, Alfred M. Mamlet, Louis Martucci, Martin M. Meehan, M. Openchowski, Lucien Quiton, Frank A. Roberts, I. B. Rothstein, J. M. Silverstein, Max E. Stern, Amedeo Turi, Oscar Ulan, R. W. Walton.

The subject of Group Insurance was touched upon; Dr. Pinneo giving a short talk on the benefits of such insurance and urging all members wishing such insurance to make their applications without further delay.

Dr. Lewis Gregory Cole, of New York City, was the speaker of the evening, demonstrating the "Diagnosis and Classification of Pulmonary Tuberculosis" by a series of motion pictures and stereopticon views. Dr. Cole provided a very interesting evening by developing the etiology, pathology, classification, diagnosis, and prognosis in pulmonary tuberculous processes, by means of well-arranged moving pictures showing the progress of destruction caused by the tubercle bacillus. These pictures were supplemented by stereopticon views of x-ray plates to emphasize the importance of taking radiographs during forced inspiration, thus bringing out the pathologic lesions in sharper relief and minimizing the confusion which might arise from normal lung markings. Following a short discussion by Dr. Baker, the meeting adjourned at 11:30 p. m.

### GLOUCESTER COUNTY.

Henry B. Diverty, M. D., Reporter.

The annual meeting of the Gloucester County Medical Society was held at the Woodbury Country Club, November 20, 1926. The following named members were present: Drs. S. Ashcraft, H. W. Stout, E. E. Downs, B. F. Buzby, David Brewer, William Brewer, Duncan Campbell, J. H. Underwood, H. B. Diverty, O. A. Wood, J. Hunter, R. K. Hollinshed, H. M. Fisler, W. J. Burkett and Emma Richardson.

The scientific program consisted of papers by Dr. Joseph E. Roberts, of Camden, on "The X-Ray Findings in Pulmonary Tuberculosis", and

by Dr. Collier, of Lakeland Hospital, "The Physical Findings and Clinical Symptoms of Pulmonary Tuberculosis". Both speakers were listened to with marked interest.

Election of officers for the ensuing year resulted in choice of the following: President, W. J. Burkett; Vice-President, B. F. Buzby; Secretary and Treasurer, R. K. Hollinshed; Reporter, H. B. Diverty; Censors—James Hunter, Duncan Campbell and C. B. Phillips; Member of Nominating Committee to State Society, James Hunter.

Board of Trustees for County Society: J. Harris Underwood, Duncan Campbell and David Brewer.

Essay Committee: Burkett, Hollinshed and Diverty.

Delegate to Medical Society of New Jersey: O. A. Wood; Alternates: E. E. Downs and B. F. Buzby.

Delegates to Cape May County Medical Society: Diverty and Hunter.

Delegates to Salem County Medical Society: S. H. Ashcraft, E. E. Downs and H. W. Stout.

Delegates to Camden County Medical Society: S. H. Ashcraft, James Hunter, C. F. Fisler, I. W. Knight and H. B. Diverty.

Delegates to Cumberland County Medical Society: C. B. Phillips, William Brewer, J. H. Underwood and Duncan Campbell.

Delegates to Burlington County Medical Society: O. A. Wood, David Brewer and James Hunter, Jr.

Delegates to Atlantic County Medical Society: W. J. Burkett, C. B. Phillips and H. B. Diverty.

### HUDSON COUNTY.

M. I. Marshak, M. D., Reporter.

The Hudson County Medical Society met at the Jersey City Hospital on November 3, 1926, with Dr. W. Freile presiding.

Because of the new parking regulations instituted in Jersey City, which are rather difficult for the profession to observe, a committee consisting of Drs. Dickinson, Spence, Bartone, Kelly and Miner was appointed to confer with the Commissioners, requesting exemption of physicians from these parking regulations; physicians cars to be recognized by either the A. M. A. or the Hudson County Medical Society's insignia. The Necrology Committee presented resolutions on the death of Dr. W. J. Rembe, which were ordered spread in full on the minutes and a copy sent to the family.

Mr. Frederick W. Gehle, Vice-President of the Chase National Bank, New York City, gave a talk on the "Doctor and His Finances". He stated that the average income of the people of the United States was about \$600 per capita or \$2500 per average family. Of a total of 65 billions, about 10 billion dollars, or an average of \$425 per family was considered savings. A great part of this vast sum of money is invested in bonds, stocks, mortgages and other evidences of wealth, for future advantages and safety. Some part of the savings goes into speculation, in a spirit of adventure and willingness to take a chance. Without some speculation, playing safety first at all times, a country tends to remain stationary or goes backward. Speculation based on sanity and thought is good, while out and out gambling is bad. He told some stories to illus-

trate how easily one might drift into gambling. It is difficult to say at times where speculation ends and gambling begins. According to an analysis made by the New York University, the most gullible people are found among business men, farmers and physicians—in that order.

Between the ages of 30 and 55 years is considered a man's producing period, during which time a man must make his estate for himself and family and produce enough as well to keep him comfortably after he has passed 55 years of age. Making a will is the first essential of sound business practice. If one is too busy with his own work, a custody account will take care of one's rights and investments. The average estate is considerably less than a person thinks he leaves, because of taxes, executor's and other fees. Another sound business practice is the keeping of a budget "Match your expenses with your income". Still another is—"Before you invest, investigate". This last is the slogan of the Better Business Bureau of the New York Banker's Association. Invest preferably in seasoned securities yielding between 5 and 5½%. The feature of a voluntary or living trust is the administration of securities to your advantage, at the discretion of the banker. These trusts may be made either revokable or irrevokable during the life of the maker of the trust. The average cost of such a trust is fixed by law at ½%. Investments in good seasoned stocks of basic industries have made more money for investors than have bonds. Building and Loan Association stock will as a rule return more than preferred bonds, and the security is quite as good. Properly administered and carefully watched real estate bonds should be good.

As an example he cited an investment rule as follows: Given \$10,000 to invest: \$5000 should be placed in safe bonds; \$3000 in stocks; \$2000 may be placed in speculative securities.

#### HUNTERDON COUNTY.

Leon T. Salmon, M. D., Reporter.

At a regular meeting of the Hunterdon County Medical Society, held at Flemington on the nineteenth of October, Dr. Frank Pinneo of Newark, and Dr. Lauterborn of Patterson were present, augmenting a representative attendance of members.

Some Legal Phases of Fractures were discussed, and especial consideration of x-ray investigations made plain by some experiences by various members of the society. At this juncture Dr. Pinneo arrived and was given the floor for his explanation of the insurance plans proposed for the benefit of all medical men in this state. The society put itself upon record as approving the plan and left the acceptance of the proposed policies with the individual members to be decided as their respective needs dictated.

The annual election of officers resulted in the following: President, Dr. L. C. Williams; First Vice-President, Dr. L. A. Hamilton; Second Vice-President, Dr. T. B. Fulper; Treasurer, Dr. E. W. Closson; Secretary and Reporter, Dr. L. T. Salmon.

The communications presented by the Secretary requesting the Society to organize a Womans' Auxillary Society and, second, a Medical Relief in Disaster body within the Society were discussed and as they were deemed impracticable in this county the communications were ordered filed.

The resolution modifying the By-laws to increase the number of meetings of the society was taken up and it was decided that hereafter 4 meetings were to be held each year. These meetings are scheduled to occur as follows:—January meeting at Frenchtown; April session at Flemington; July at Glen Gardner, and in October again at Flemington. The fourth Tuesday in each of the foregoing months was determined as the meeting date.

Election of Delegates to the State Society was postponed.

Resolutions were ordered drafted upon the demise of Dr. George N. Best, our late distinguished member.

#### MERCER COUNTY.

A. D. Hutchinson, M. D., Reporter.

The Mercer County Medical Society met in the Carteret Club on November 10. The Annual Banquet was served at this time, following which, the members were treated to a most interesting educational discourse by Dr. Henry O. Reik, who illustrated his lecture with some beautiful lantern slides. These were natural color negatives, photographing the actual natural coloring found in the woods and forest at sunrise and eventide, in all the seasons of the year. Dr. Reik explained the process of manufacture of these plates, and in just what manner the delicate tints of the human body were produced upon the curtain. His extensive travels have not only taken him throughout the length and breadth of the United States, but in the grandeur of the European countries he has found and brought back to us many of the wondrous scenes, both natural handiwork and that created by the humble toil of man.

The evening was all the more interesting because of the genial ability of Dr. Reik to point out the most beautiful portions of these wonderful artistic colorings both Divine and human. The members enjoyed the lecture, were very enthusiastic and expressed much praise of the work and accomplishments of the speaker.

#### OCEAN COUNTY.

George W. Lawrence, M. D., Reporter.

The Annual Meeting of the Ocean County Medical Society was held November 12, at 4:30 p. m., at the Y. M. C. A. Building, in Lakewood. Dr. Denniston, of Point Pleasant, President, being in the chair and 17 members from the county being in attendance. After the reading of the minutes, the following officers were elected for the ensuing year: President, Irwin H. Hance, Lakewood; Vice-President, F. Bunnell, Barnegat; Secretary, T. F. Thompson, Lakewood; Treasurer, Frank Brouwer, Toms River; Reporter, George W. Lawrence, Lakewood; Annual Delegate, Frank Denniston, Point Pleasant; Alternate, H. B. Disbrow.

A discussion followed concerning new By-Laws. A committee previously appointed, but not yet ready to present the same, was continued until proper By-Laws may be prepared. Discussion was also taken up in regard to having more frequent meetings and it was the general sense that meetings should be held in the future at least 4 per annum.

Three new names were presented for membership and referred to the Membership Committee.



H. B. Disbrow, of Lakewood, then presented a paper, which, without bearing any specific title, could be summed up as "Points on Diagnosis of Abdominal Conditions". This paper will probably be available for later publication in the Journal.

The meeting was adjourned at 5:15, subject to call of the President.

### PASSAIC COUNTY.

Donald B. Low, M. D., Secretary.

The annual meeting of the Passaic County Medical Society was held November 18, 1926, at the Health Center Building, Paterson, N. J., with 26 members present.

Dr. Levendusky, of Passaic, and Dr. Hans Wassing, of Paterson, were elected into our Society. Dr. L. Bohl read the treasurer's report and it was ordered to be audited.

Dr. O. R. Hagen, of Paterson, was elected President; Dr. G. E. Tuers, First Vice-President; Dr. William Spickers, Second Vice-President; Dr. Donald B. Low, Secretary; Dr. Louis Bohl, Treasurer; and Dr. Chas. R. Mitchell, Censor. The annual delegates elected are as follows: Chas. Murn, Wm. Dwyer, A. M. Schultz, E. A. Atwood, I. Feigenoff, Leo Becker, and A. W. Macgregor. Dr. H. H. Lucas was elected as representative on the nominating committee of the State Society.

Dr. Cogan called the society's attention to the fact that the Haledon Board of Education rescinded their resolution of 4 years ago concerning compulsory vaccination and from now on vaccination is not required in the Haledon schools. The Passaic County Medical Society ordered the matter to be referred to State Welfare Committee with the object of having vaccination compulsory.

The proposed amendment to the by-laws, given in detail in last month's Passaic County report was discussed by Dr. Yates and Dr. Marsh. The amendment was voted upon and rejected.

The President read his annual address after which the newly elected President was presented to the Society.

A collation was served following the adjournment.

### UNION COUNTY.

#### Westfield Medical Society.

F. A. Kinch, M. D., Secretary.

This society has not been dormant, even if the publicity committee has not reported its doings.

Last May, arrangements were made to celebrate the twentieth anniversary of its organization and give Dr. J. B. Harrison a complimentary dinner in honor of his 50 years of active practice. The June meeting was given over to the anniversary dinner and speeches. Sixteen members and guests attended at Echo Lake Country Club. The guests were Mayor William M. Beard, D. C. Bowen, of the State Board of Health, Andrew Carney, of the local Board of Health, and A. M. Cartler, of the Board of Education.

Dinner speeches were heard from: Dr. C. T. Decker, "Introduction and Welcome"; Dr. J. B. Harrison, "History"; Dr. F. A. Kinch, "Profes-

sional Benefits"; Dr. R. R. Sinclair, "Civic Benefits"; Dr. G. S. Laird, "Personal Benefits"; and Mr. D. C. Bowen, "Local Health Benefits". These five-minute talks were much appreciated by the audience and brought out many very good ideas on the subjects named.

At the annual meeting in October, the election of officers was held. Dr. J. B. Harrison, Dean of the Profession in Westfield, was elected President of the society. The other officers were: Vice-President, R. G. Savoye; Secretary and Treasurer, F. A. Kinch; Comptroller, Dr. C. T. Decker.

Tuesday evening, October 26 marked an epoch in our history, for on this evening a dinner was given to Dr. J. B. Harrison in honor of his 50 years of active practice. The dinner was served at Echo Lake Country Club. Dr. Harrison spoke of 50 years of active work and of his appreciation of the thoughtfulness of the society in honoring him as they had. Dr. Decker spoke of the good fellowship among the members and made some very happy hits on the characteristics of some members. Dr. Savoye told of the good work Dr. Harrison had done on the local Board of Health. Dr. E. W. Hedges, of Plainfield, related some funny incidents in Dr. Harrison's career and told us something of what the physicians in the neighboring cities thought of him. Dr. Kinch, Chairman of the Dinner Committee, acted as Toastmaster, and gave the speech of welcome, wishing the Doctor many years of activity and good health.

The society is actively interested in the affairs of the town and many public medical questions are referred it for consideration and advice.

### NEW JERSEY TUBERCULOSIS LEAGUE.

Ernest D. Easton, Executive Secretary,  
Newark, N. J.

The Twentieth Annual Meeting of the League was held at the Hotel Walt Whitman, Camden, October 21 and 22, 1926, the President, Dr. Samuel B. English, of Gen Gardner, in the chair. The attendance was large and the conference was considered to have been very successful.

#### President's Address.

Dr. English, in his Presidential Address, reviewed sketchily the advances made in dealing with the tuberculosis problem during the life time of this League, and followed with a consideration of the work at hand.

"The New Jersey Tuberculosis League, in greatly enlarging its scope of work, including much effort, particularly among children and factory workers, has certainly made no mistake, and these departures are to be commended and encouraged. A study based upon New Jersey records has seemed to reflect only dimly the real success of our campaign. As is well known the death rate is 200 per 100,000 in New Jersey at the present time. This means the saving of thousands of lives yearly. According to the impressions of some statisticians this decreasing death rate will mean but  $\frac{1}{4}$  as many deaths in 1930 as there were in 1904. It might begin to look, therefore, that the slogan, 'No Tuberculosis in 1950', may not seem impossible.

In determining how we may continue to decrease the incidence of this disease, we naturally fall upon the expedient of attempting to analyze the factors involved in the improvement to date.

Only a few of these will be touched upon, including such matters as virulence of the tubercle bacillus, the general resistance of our population, the influence of immigration, education, and our general standards of living. We should consider more fully just the type, size and general utility of our various sanatoriums, upon which we know as yet the greatest burden of our fight is still to rest. It is fully apparent to us who have given the matter study that the entire burden of the fight can not, however, be left upon the shoulders of those conducting these institutions. Many of us who are familiar with the situation know we can not continue to abandon the patient after he leaves the sanatorium. These and many other factors present themselves, but time will not permit their analysis."

"It is likely that every epoch in history has fancied that the standard of living attained has been so far out of proportion to that previously obtained that grave fears were held as to whether it might be continued or sustained. As far as the question of feeding and resistance is concerned, it would seem difficult to ever produce a situation where fewer people were necessarily subjected to undernutrition than in our ever-expanding country. It is possible, as population increases and the strife of existence becomes more onerous, that we also shall arrive at some such situations as have recently come to pass in countries as well organized as England, particularly where economic stress attendant upon unemployment arises. In fact, many observers, instead of fearing that our people are to suffer from undernutrition, rather fear a wholesale tendency to obesity, with resultant degenerative diseases hastened by too rich and too high living and too little physical exercise. As far as we are concerned, the obvious need is shown for us to continue our interest in everything that will keep our people properly employed, with suitable hours of working and with a stability of existence based upon a fair and equitable relationship between the forces controlling our national resources and developing our industries. This calls for an intelligent interest of all of us in our civic and political growth. We are possibly inclined to feel a suspicion of those constantly striving for better hours or higher wages, but it is manifestly to the advantage of general health conditions if the great force of working people are prosperous and contented. It is one of our duties, in so far as we can to bring such conditions about."

"Education is always mentioned as one of the chief advantages of our institutional care. Let us ask, how and why? It is unfortunate that education has an influence in the mass but is often by no means reflected in the individual. A fair sprinkling of mentally alert individuals at strategic points keeps a horde of less intelligent reasonably employed. Hence, education probably has a reputation far out of proportion to its real worth. Education and intelligence are often confused, the one may be acquired, the other is a birth asset, compared with which all our bestowals of opportunity are as mists before the mounting sun. Years of education are as surely wasted on some human beings as if Michael Angelo had done his heroic tracings in sand. Those of you who have said so much about teaching the patient how to live might well ask yourselves the question, who among those I am teaching are capable of being taught? The answer can certainly neither be easily nor lightly given. This problem can be more clearly seen possibly by noting that it is totally impossible at the present time

to give our best and most successful treatment for diabetes to a patient who is incapable of being taught. It is certainly accepted that it is impossible to treat the unteachable patient with insulin. Much time could be saved in many institutions and clinics if conscientious effort could be made to find out those tuberculous patients who are fundamentally incapable of being taught. Their future control could then be determined, with the addition of such coercive measures and such restraint as would safeguard others. The rest could often profit greatly by more intensive personal training where more time was available for them. The campaign for general education, however, is going along splendidly, and it is doubtful whether we could improve on it much at the present time."

"I have collected some data relative to the development of our state and county institutions. It is noted that this list, with bed capacities, does not take into consideration certain private institutions and beds that are available in conjunction with other public hospitals. It is quite likely that the number of such beds will, as rightful responsibilities for proper teaching of nurses, interns and other members of the medical profession, in the matter of the care of the tuberculous become more widely understood, be increased.

#### List of Beds for Tuberculosis in New Jersey:

New Jersey Sanatorium.....	298
Allenwood Sanatorium .....	55
The Nursing Cottage .....	10
Tuberculosis Preventorium for Children ..	180
Lakeland .....	228
Jersey City Hospital .....	24
Shonghum Sanatorium .....	44
Newark City Hospital .....	25
New Lisbon .....	55
Paterson City Hospital .....	75
Pine Rest Sanatorium .....	48
Bergen Pines .....	150
Bonnie Burn Sanatorium .....	200
Hudson County Tuberculosis Hospital .....	221
Municipal Tuberculosis Hospital .....	100
Essex Mountain Sanatorium .....	250
Total .....	1963

This data, while probably incomplete, shows New Jersey to have fallen behind the procession of many of the more progressive states in the determined provision of 1 bed for each death. The 2 counties in which this is most evident are Middlesex and Passaic. While these 2 counties are spending a considerable sum of money, it is evident that this is being spent for bed care in distant institutions at the insistence of interested local agencies. When our local institutions are considered as centers of teaching and propaganda it takes little argument to prove that these 2 large counties are not doing their full duty to their tuberculous constituents. The 4 counties, Sussex, Warren, Hunterdon and Somerset, in the North, and Cape May, Cumberland, Gloucester, Salem and Ocean, in the South, also present difficulties in that they are probably of insufficient extent for each to properly maintain an institution. Proper legislation is, however, available to care for the problem and this Association is, I believe, falling short of its duty when we fail to continue to develop further interest in these sections."

"For a continued and successful fight, much remains yet to be done. It is my firm belief that whatever development may come in the future, we should hold rigidly to keeping our tubercu-



losis clinics and our visiting nurses in the closest touch, if not under the same control, as our institutions. Our goal must be to have a registration within our districts of every known active case of tuberculosis. This means increased work. Our present proportion of deaths to report is 1 to 1-6. The information collected may be, when properly guarded, transferred to various health boards, but the actual control, direction and supervision is obviously not so much an administrative problem as it is a personal one. When this can be carried out by the patient's own physician the nurses in connection with tuberculosis clinics and the physicians therewith, as well as the institutions in which most of these patients have spent more or less time, are best able to provide this needful and necessary diplomatic oversight.

Finally, it must be quite evident that if every positive sputum case were under such supervision and control as to give him such surroundings as to make unlikely the infection of others, the control of tuberculosis would be just as sure as that of yellow fever, where the mosquitoes are not allowed to infect the human being. We would undoubtedly find that some individuals securing this control would have it forced upon them unwillingly. Sanatorium trained physicians are always keen upon the features of providing such opportunities for work and self-sustenance as are hinted at in various 'colonies' provided for that purpose. Even where this excellent development has not yet come about, have we not at the present time an extraordinary network of public health agencies with many visiting nurses in the field, all of whom can be readily drawn into a plan, which has for its ultimate intention, as far as tuberculosis is concerned, the placing of an hypothetic cordon about the positive sputum case, making it easy for him to do his obvious duty in safeguarding his fellowmen? The work necessary to bring about this next vital step is one of the most engaging problems yet before us."

#### Report of Executive Secretary.

In presenting his report, Mr. Ernest D. Easton, Executive Secretary, pointed out that rapid strides are being made in conquering a disease which has been man's chief enemy since the time of Hippocrates, 320 years before Christ. The death rate from tuberculosis in 1925 was 82.9; against 86 for 1924 per 100,000 population, when the death rate for the United States registration area was 90.6. Based on the 1908 death rate from tuberculosis, 183.3 per 100,000 population, 26,742 lives have been saved in the past 18 years. In other words, if the death rate of 1908 had continued, over 26,000 more deaths would have occurred in that time. Irving Fisher estimates the value of a man's life to his family and community at \$5500. The money value of these lives saved in New Jersey since 1908 reaches the staggering sum of \$146,961,000. And where has all of this money gone? Not only to increase health and happiness but into the purchase of autos and into the savings banks of the state, as well as many other luxuries for individuals and families.

Reviewing the next steps in the fight against tuberculosis Mr. Easton stated that a large proportion of cases leaving our sanatoriums lapse after a period of from 3 to 5 years. This is largely due to the occupation, physical strain, home life and the economic burden placed upon the patient in the years immediately following his recuperation. At the same time, something

should be done to bridge the gap and save more of these lives.

Another field of activity which seems to offer big returns is use of the x-ray in examination of school children. Experience shows that between 1 and 2% of all high school pupils have either active or healed tuberculous lesions. Many of our athletes are actually suffering from active tuberculosis. An x-ray and physical examination might save many of these lives. Recent experiments have shown that much infection occurs from dust, droplets or spray. We should, therefore, press forward in our campaign against spitting and urge that everyone cover his cough or sneeze. As so many of our respiratory diseases are developed during the winter months, the open window campaign was urged as a good preventative. A campaign against measles, whooping cough, diphtheria and scarlet fever, which tend to weaken the body and make them susceptible to other diseases, would be one of the next steps.

Mr. Easton praised the industrial work being done and urged that everyone have an annual physical examination, to the end that all bodily defects may be found and corrected before the inroads of disease have manifested themselves to any great extent.

#### Legal Settlement for Tuberculosis Patients.

Commissioner William J. Ellis, Department of Institutions and Agencies, Trenton, brought up the necessity for a change of legislation regarding the present legal settlement which must be made to determine financial responsibility for the care of indigent tuberculous persons, and urged that a committee be appointed by the League in the interest of such legislation.

Later, at a meeting of the Board of Directors, a committee was appointed consisting of Drs. Samuel B. English, John E. Runnells and Hugo Alexander to work with the Department of Institutions and Agencies and the County Adjustors to suggest suitable legislation to be brought before the next session of the New Jersey Legislature.

#### Industrial Work.

Dr. William J. McConnell, Medical Secretary Philadelphia Health Council, in his address on 'Industrial Work', said that we must not recommend industrial health work as a panacea in the control of tuberculosis but that it is most important in treatment; that there are 3 periods of importance in industrial work: first, the entrance physical examination; second, the promotion or maintenance of health during employment; third, care after convalescence, through illness or accident. Dr. McConnell stated that about 7% of employees have health supervision during working hours. It is our duty to demonstrate to employers the value of medical service and how it can be made possible. He stated also that in order to get early cases it was necessary to go into plants, make physical examinations and get those needing it under treatment.

Mr. Coleman, New Jersey Tuberculosis League Industrial Secretary, discussing Dr. McConnell's paper, said that the League considered industrial health work very worth while. Started 1½ years ago in Newark; 1895 employees have been examined. Practically all of those employees thought they were in good health, but results of examinations showed that only 89 out of 1800 had no physical defects. In fact, 130 lung defects were found; 1% of positive tuberculosis; 34 suspicious. Re-examinations have been made in

several of the factories this year, and in the follow-up work, 11 patients were transferred to the Venereal Disease Clinic. Mr. Coleman pointed out that reports from the Compensation Bureau show that out of a 60% figure of absenteeism in labor, 40% is due to sickness.

#### Responsibility of the Public Health Nurse to Herself.

Miss Katharine Tucker, R. N., General Director Philadelphia Visiting Nurses Society, said: The public health nurse has a very important responsibility to herself, both that she may be the best possible nurse and also that she may be a well rounded human being. Every day she has to meet all sorts and conditions of people, not only to give them nursing care but to advise them as to their health and as to every phase of their living. In order to do this she needs wisdom, judgment and perspective. These characteristics she gets not just from her nurse's training, but from her own life and experience. If this is narrow and limited, so will her judgment be.

According to Dr. Richard C. Cabot there are 4 essentials for a full life—work, play, love and worship. The public health nurse surely has all that could be desired of the first of these elements; it is essential that she should have the other 3 in equal measure if she is to give and get what she ought from the first.

Play means different things to different people. For some it is golf, while for others it is garden, theatre, music, dancing, tramping, and various other indoor and outdoor activities. In any case it must be a change from work and a relaxation that brings joy and rest. Another way of putting it is that a public health nurse ought to have an avocation, a hobby, some interest outside of her daily work. She ought to read books that have no bearing on health, but have much bearing on life. She ought to associate with other people who are not nurses or who do not necessarily have a special social or health interest. In arranging her life, time should be set aside for these other activities with as much conscience as she gives time to her work.

Association with friends that bring comradeship and satisfaction to the affections is a particular essential to anyone who is giving so much of herself to others as is this nurse. For that reason I believe that often, contrary to usual opinion, the married nurse may have an unusual amount to give to those whom she serves.

How much time does the public health nurse have for worship? Not just in churches, but time with herself to consider her own ideals, to realize beauty wherever she may find it in the world about her. Dr. Cabot says—"We throw ourselves into worship, as we dive into the ocean, confident of its well-tested power to lift and refresh us, but no longer balancing, sustaining, or directing ourselves step by step as we do on the land of ordinary thought and action".

The public health nurse is responsible to her work and to herself to be a healthy, well rounded human being, leading a full life, full of varied interests and activities, full of play and relaxation, rich in friends and comradeship, and irradiating that sense of the Divine in all things.

#### A Complete School Program.

Mrs. I. W. Knight, of Pitman, New Jersey, presided over the Friday morning session, at which a series of short papers upon the general topic were presented.

#### Medical Inspection.

Dr. A. L. Stone, Director Public Health, Camden, said: Medical inspection in its relation to a complete tuberculosis program may well be termed the advance guard of the army in our warfare against the so-called "White Plague". All problems in preventive medicine are best solved when we apply investigation, demonstration and education. Investigation has shown that 80% of all children are born healthy, yet 80% of all persons living until 21 years of age are below normal; also that 60% of all boys rejected from the draft because of 10% or more underweight, were tuberculous. The major portion of this period of transition from high normality to low normality is spent in schools. Where would it be possible to find a greater opportunity to apply a tuberculosis program than in the schools? Fifteen years ago the thought that children contracted tuberculosis of the lungs had not been expressed convincingly in medical literature. Today more definite knowledge is at hand to enable us to approach the subject with hope of greater success.

Tuberculosis has been found to be quite a general infection. A large percentage of school children in the higher grades show, by tests, that they have been sensitized to tuberculosis. This may be taken to mean that practically all persons are more or less infected by the disease, and the immunity they develop determines the state of their health and the length of their lives as regards that specific disease. At present no method of artificial immunization is known but it is well known that if infection is discovered early there is every hope that a natural immunity may be developed by proper methods of hygiene and diet.

Early detection of infection is of utmost importance and it is in the routine inspection of school children that we should discover infection early enough to do the most good.

When the reported cases of tuberculosis reach their peak in the 8 to 15 year group, instead of the 20 to 30 year group as at present, we will know that we are accomplishing results. The death rate from tuberculosis will decrease accordingly.

Loss of weight in adults is a sign of trouble, but lack of weight in a child as compared to a normal weight indicates a handicap, retarding development. We should be prepared in school work to select the suspicious cases in the 10% or more underweight children and send them to the special tuberculosis agency for complete examination of the chest, a skin test, and an x-ray examination if necessary.

Medical inspection in schools covers multiple defects and under existing laws a thorough chest examination can not be made unless with consent of the parents and then it is often attempted under unfavorable surroundings. The skin test can be given only to clinic cases and the x-ray examination only with proper facilities, never included in school work.

In large cities or communities the regularly constituted health department should have equipment to take this work along with the school work and make a continuous chain in the endeavor to combat tuberculosis.

Having found the infected children, it becomes our duty to demonstrate what can be done to produce immunity.

Open cases of tuberculosis are rare in children under 12 years of age, hence they are not



a menace to other children if controlled in groups.

The preventorium which accompany a complete program would be inadequate if all children infected were sent for admission. School care and follow-up work in the homes with more education of the parents will, in the end, halt the expenditure of vast sums of money for hospitals and allow the money to be spent nearer the source of trouble—the home.

Education along health lines is no more costly than the teaching of arithmetic or English, and should rightfully be included in a community's responsibility and paid for out of taxation. Many cities and states are following this plan and they find it productive of encouraging results.

#### Open Air Schools.

Dr. I. E. Gluckman, Newark: We have been teaching, and rightfully so, that the care of the infant and child in adolescent state is essential in our prevention work in tuberculosis. We have been told that tuberculosis in adults is due to infection in childhood. If these facts are true, and I have no reason to believe they are not, what is more natural for us than to center all work upon children who attend schools? It is the duty of the Board of Education to watch and maintain the health of the children who attend schools, not alone from the standpoint of keeping the child well, but also as a preventive measure. The Board of Education in Newark has taken this view and has established a school where children who have definite signs of tuberculosis of the chest, who give a positive reaction, and who show positive signs on x-ray examination, can be taken from their regular classes and treated while attending school. I believe that Newark was one of the first cities to see the value of such a school. The system established in Newark is simple and appears very effective. All undernourished or underweight children are referred to the school physician, and if he finds any signs or if there is a history of tuberculosis, the child is referred to the clinic. This child is given a thorough examination and, if a suitable case, is sent to the special school where he is given his regular work in the open air instead of in the closed classroom. All children are given breakfast, dinner and afternoon lunch, with rest periods of 1 hour in the morning and afternoon.

The children are watched and examined about every 2 months. All children with active conditions are advised to stay in bed, and the family is notified to have their physician attend the child. This method of treating this type of child has proved very effective, and the results obtained have warranted the small extra cost entailed. The class consists of 45 pupils, and 2 experienced teachers distribute the work to be done. A nurse is in attendance most of the day.

I believe there is a great future for this class of work, and the Board of Education has passed a resolution to spend \$150,000 to build an up-to-date open air school where sun and lamp treatments may be given in conjunction with the schooling.

#### What Extension Service Can Do, Girls' Club Work.

Miss Marion Butters, Assistant Director of Co-operative Extension Work in Agriculture and Home Economics: Believing that it is better to start with the right ways of doing things and with correct habits, the service includes work with girls of school age. They are formed into clubs under leaders and such programs as appeal to

young people are prepared for them. They learn how to do many of the tasks of life through their club activities. At the same time they find satisfaction through accomplishment, develop habits of thrift and orderliness, form friendships through coöperative effort, learn valuable lessons in leadership through their club activities and make contacts with home and community problems.

The program for 1926 and 1927 emphasizes particularly: (1) Healthful conditions in the home; home management clubs study the care of the hair, hands and feet; the daily and weekly care of the girl's own room. (2) Setting up right standards for feeding the family; the Food Club's program includes the planning and preparation of a healthful menu. (3) The development of right health habits among children; each phase of the Extension Program for Juniors emphasizes this feature. The clothing program more than any other can feature the simplicity of clothing renovation and care.

This service is available to any group of young people especially rural girls of elementary school age. It is designed especially for those groups who do not have the opportunity of getting this information through the schools.

#### What the Tuberculosis Association Can Do.

Miss Margaret S. Haines, Burlington County Tuberculosis Association: So far the tuberculosis work has figured most actively in the lower grades, while talks, exhibits, loan collections of posters, and literature have been found to be of great assistance to classrooms of higher grades. Many teachers appreciate the value of such collections but rarely have provision made for the expenditure it requires. Health posters made in one school presented to the League may be used in other schools where the enthusiasm for health work is not so apparent. This impresses upon the givers the important part they play and the recipient rarely fails to compete in the health work.

The opportunity knocks at the door of every tuberculosis league to make itself useful with a school program if a feeling of good fellowship is cultivated; a sympathetic attitude, consideration for the time of the teacher, and appreciation expressed for the opportunity to speak to the pupils, carries great weight and always insures a welcome. No school equipment is too poor and no knowledge of health rules too slight to be an excuse for not teaching health habits, but the formation of health habits requires a much longer time, so the gratitude expressed by the teacher for help is due to the fact that the same message brought by someone outside of the classroom helps to build up the health program.

Correction of physical defects is perhaps one of the most important aids rendered to the school and backing up the teacher to demand badly needed equipment is a close second. It has been said that the most important by-product of public school system is the quickening interest in the physical welfare of the school children.

This has been verified recently when, in an address to the 600 public school teachers at the Institute in Burlington County, the County Superintendent charged them to feel the responsibility for the health of the child and to work heartily with the Tuberculosis League and all health agencies.

Miss Laura Woodruff, R. N., Hudson County Tuberculosis and Health Association: A school program is not complete without a complete health program. This means: (1) A complete ex-

amination of every child (stripped to the waist). (2) Compulsory clearing up of all possible physical defects. (3) Weighing and measuring all children to get at the underweights and malnourished. We all agree that every child has the right to be born of clean, healthy parents. In each new school that we make a survey we find at least 1/3 of the children are 10% or more underweight.

I should like to quote right here from one of the abstracts of papers read at the National Tuberculosis Association's conference in Washington, where Professor Leon Bernard, M. D., Paris, states that "Tuberculosis starts during childhood and most often during early infancy. What is called in the adult the 'onset' is merely a manifestation of the fresh infection, or more often, of a revival of the old infection.

That the first infection does occur during childhood is due to the susceptibility of the race as well as to the fact that man comes in contact with the bacillus in the early years of life. An etiologic inquiry into the first years of life always reveals the disease as of family or domestic origin, most often maternal—later in life the origin becomes increasingly difficult to explain, an occult infection becoming the rule. The frequency of a maternal origin leads one to inquire into heredity—in fact, in spite of the recent work on the transplacental transmission of filterable forms of Koch bacillus, the genesis of tuberculosis must still be attributed to contagion. The relationship between the conditions and the consequences of the contact, the results obtained by separating children exposed to infection are decisive argument in favor of this theory".

When we realize that every case of malnutrition is a potential case of tuberculosis, we begin to wake up to the fact that we have a tremendous piece of work on our hands. Just how we shall attack this problem is a matter for each association to decide. We all know that by continued effort with nutrition classes in our schools, we can reduce this malnutrition in 2 or 3 years from 33 1/3% to 25%—is this enough? Are we satisfied with our results?

We must get coöperation from the school nurse that will be adequate first in home visits and in clearing up of physical defects.

There is no question but that it is the job of the Tuberculosis League to make a demonstration in establishing a preschool clinic if there is no available organization to do this piece of work. Where there are infant welfare stations they should carry these children and their mothers until their children reach school age and can be delivered to the school with a clean bill of health.

The Tuberculosis Association should be ready and willing to turn over any piece of demonstration work to any organization which is equipped to carry it, preferably one supported by public funds.

What should be our next step? Should an active case of tuberculosis be allowed to remain in a home where there are children?

The time is coming when every child who enters our public schools must enter with a clean bill of health.

I am sure you will feel a sense of success with me in this, the best year's work of the Hudson County Tuberculosis League, which was organized in 1919 with a very strong group of public citizens backing it and has continued to grow and to put on various demonstrations until today it is free to do only preventive work.

Years ago the Christmas Seal organized and financed the first tuberculosis clinic. Now there

are 6 active and growing clinics under the direction of Dr. B. S. Pollak. The first open air class was started by this same little agent, the first nutrition class was also organized and today all of these are under the public funds except 2 nutrition classes in Secaucus and 1 in a parochial school in Jersey City. We have the promise that if the parochial school nutrition class proves its worth, funds will be asked for the 1927 budget to adequately organize such classes in all parochial schools in Jersey City. The 2 new projects started in the county this past year were pictures in the playgrounds and parks, and the nutrition classes in the parochial schools. Some of the things that the sale of Christmas Seals made possible during this past year are as follows: (1) Brought back 436 lb. more of boys and girls than were taken to camp. (2) Provided the first month's care of 49 families, including 186 children, and placed them under the State Board of Children Guardians. (3) Provided a full time nurse. (4) Showed health motion pictures in the parks and playgrounds in Hudson County reaching 6700 persons. (5) Distributed information in regard to tuberculosis, and health literature to over 27,000 persons. (6) Reached over 6000 persons by health talks in a large number of industrial plants and before organizations. (7) Conducted nutrition classes for 200 children, 25% of whom reached their normal weight for height. All but about 6% improved. (8) Furnished health calendars and posters for 26,000 children in the public and parochial schools. (9) Maintained 2 booths reaching 300,000 people where the latest information about the prevention and cure of tuberculosis could be obtained. (10) Weighed and measured 7000 persons, both children and adults, advising them as to proper weight and other health matters. (11) Furnished the material for the conduct of additional nutrition classes for 1500 children.

From the start of 1 nutrition class in the West Hoboken section there is now 1 class in each public school in charge of the regular school nurse.

#### The After-Care of the Tuberculous.

F. J. H. Coutts, M. D., Senior Medical Officer, Ministry of Health, London, England. (This address, an especial feature of this convention, is a very interesting contribution and will be published in full in the January Journal.)

#### Board of Directors Meeting.

At a meeting of the Board of Directors and Executive Committee of the New Jersey Tuberculosis League, Inc., held at Lakeland, Camden County Hospital for Tuberculous Diseases, the following officers were elected for a term of 3 years: President, Dr. Marcus W. Newcomb, Medical Director Burlington County Tuberculosis Hospital, New Lisbon; Vice-President, Dr. John E. Runnells, Superintendent Bonnie Burn, Union County Tuberculosis Hospital, Scotch Plains; Secretary and Treasurer respectively, Mrs. E. G. Shreve, Atlantic City, and Mr. W. L. Kinkead, Ridgewood, re-elected; Executive Secretary, Mr. Ernest D. Easton, Newark. In addition to the above, the following were named as Members of the Executive Committee to serve with the aforementioned officers: Dr. Samuel B. English, Superintendent New Jersey State Sanatorium, Glen Gardner; Dr. B. S. Pollak, Superintendent Hudson County Tuberculosis Hospital, Secaucus; Mr. J. M. Waddell, Blair Academy, Blairstown; Dr. Joseph R. Morrow, Superintendent Bergen Pines, Bergen County Hospital, Ridgewood; Mrs. Charles A. Bye, Lakewood, and Miss Buelah Bain, Montclair.



# Miscellaneous

## HYGEIA AS A HOLIDAY GIFT.

Recently a letter was sent to a selected list of laymen announcing that the American Medical Association is now publishing Hygeia, and describing the features of the magazine. One of the letters came into the hands of a banker in Asheville, North Carolina. So impressed was he with the value of Hygeia to everyone that the bank of its own accord and at its own expense took large display space in two Asheville newspapers to reproduce portions of the letter, publicly endorse Hygeia and let citizens know that it could be obtained from the American Medical Association, 535 North Dearborn Street, Chicago.

This instance in itself might not have a great deal of significance, but it is typical of the way in which influential individuals, organizations and institutions have received and endorsed Hygeia. Without any general advertising, and with conservative efforts to promote circulation, Hygeia has become widely known among intelligent laymen and leaders in health work.

What does this mean to the medical profession? If anything, it signifies that the public is awakened and eager on matters of health, and that it looks to the medical profession for information. Thousands of physicians feel this responsibility and help to meet it by keeping a copy of Hygeia in their reception room.

Another excellent plan which finds favor with many physicians at the holiday season is to give gift subscriptions for Hygeia to patients or other friends. It is something that can be given with propriety and with the feeling that it will contribute to the welfare and happiness of the recipient.

The special holiday rates are as follows:

One subscription .....	\$3.00
Two subscriptions or one subscription for two years .....	5.00
Three subscriptions or one subscription for three years.....	6.00
Each additional subscription.....	2.00

On request, a beautiful gift card will be sent just before Christmas.

Your cooperation will be appreciated.

## THE DREAMERS.

Reprinted from The Johns Hopkins Alumni Magazine.

They are the architects of greatness. Their vision lies within their souls. They never see the mirages of Fact, but peer beyond the veils and mists of Doubt and piece the walls of unborn Time.

The World has accoladed them with jeer and sneer and jibe, for worlds are made of little men who take but never give—who cheer a grudge and grudge a cheer.

Wherefore, the paths of progress have been sobs of blood dropped from their broken hearts.

Makers of empire, they have fought for bigger things than crowns and higher seats than thrones. Fanfare and pageant and the right to rule or will to love are not the fires which wrought their resolution into steel. Grief only streaks their hairs with silver, but has never greyed their hopes.

They are the Argonauts, the seekers of the priceless fleece—the Truth.

Through all the ages they have heard the voice of Destiny call to them from the unknown vasts. They dare uncharted seas, for they are makers of the charts. With only cloth of courage at their masts and with no compass save their dreams, they sail away undaunted for the far, blind shores.

Their brains have wrought all human miracles. In lace of stone their spires stab the Old World's skies and with their golden crosses kiss the sun.

The belted wheel, the trail of steel, the churning screw, are shuttles in the loom on which they weave their magic tapestries.

A flash out in the night leaps leagues of snarling seas and cries to shore for help, which, but for one man's dream, would never come.

Their tunnels plow the river bed and chain the islands to the Motherland.

Their wings of canvas beat the air and add the highways of the eagle to the human paths.

A God-hewn voice swells from a disc of glue and wells out through a throat of brass, caught sweet and whole, to last beyond the maker of the song, because a dreamer dreamt.

What would you have of fancy or of fact if hands were all with which men had to build?

Your homes are set upon the land a dreamer found. The pictures on its walls are visions from a dreamer's soul. A dreamer's pain wails from your violin.

They are the chosen few—the Blazers of the Way—who never wear Doubt's bandage on their eyes—who starve and chill and hurt, but hold to courage and to hope, because they know that there is always proof of truth for them who try—that only cowardice and lack of faith can keep the seeker from his goal, but if his heart be strong and if he dream enough and dream it hard enough, he can attain, no matter where men failed before.

Walls crumble and empires fall. The tidal wave sweeps from the sea and tears a fortress from its rocks. The rotting nations drop from off Time's bough, and only things the dreamers make live on.

They are the Eternal Conquerors—their vassals are the years.

## THE GOVERNMENT OF A PROFESSION.

(Reprinted from the Journal of New York State Medical Society, Nov. 1, 1925.)

By George W. Whiteside, Esq.,

Counsel, Medical Society of the State of New York.

To publish the erring member of the legal profession who stray from the paths of rectitude has long been the policy of the Bar Association in New York City. The Committee on Grievances has afforded the aggrieved client a forum wherein he needs no lawyer to plead his cause, and has furnished the lawyer complained against a tribunal composed exclusively of lawyers, who are expert in applying standards of professional honor to the transaction presented for their scrutiny.

This Committee has gained the confidence of the public and of the profession. It is composed of 9 unpaid members of the Association, who assume the onerous and unpleasant responsibility of judging their brother lawyers, to the end that public confidence in the profession may not be

shaken by failure of retributive justice to the unscrupulous and unworthy member. It is not a mere gesture or an abstract declaration of professional principles that this committee makes. They take specific complaints and dispose of them.

The 9 members of this Committee, in the year 1923-24, held 49 meetings, which is about an average of a meeting a week. They had brought to their attention in that period 1234 complaints against attorneys. They actually tried 59 cases, and in 29 of these cases requested that disbarment proceedings against the accused attorneys in the Appellate Division be instituted. As a result of their work in the year, the Appellate Division disbarred 4 lawyers, suspended 5 for periods ranging from 3 months to 1 year, censured 1, excused 1, and dismissed the proceedings in 1 case. This large number of complaints so considered covered a broad field. In 386 cases attorneys were charged with negligence, carelessness, bad advice and collusion against their clients' interests; in 226 instances they were charged by clients as a result of disputes over fees; 173 complaints dealt with alleged conversions of money; subornation of perjury was charged in 59 cases; the use of threats and blackmailing tactics in 39 cases, and improper advertising in 38 cases. These instances cited indicate the type of matters that this Committee considered during that year. This activity was supported, during that time, by 3224 members, who paid dues of \$182,655.00, an average slightly under \$60.00 a year per member. The Committee doing this work spent \$19,319.49.

Suppose there had been no such body functioning in the legal profession. Where would all of this professional dirty linen have been washed? How many innocent lawyers accused in 1234 complaints would have their names dragged before the public and their professional reputation besmirched? How many of the guilty would have been punished? Was it worth the money that was spent during that 1 year and the time of the 9 members of that Committee to accomplish the results so essential to the public interests, so important to the profession and so vital to the individual? There are very few cases brought against lawyers in the courts for their alleged shortcomings and there is little publicity that unfavorably affects the profession—suing lawyers does not seem to be a very popular procedure. Has the activity of this Grievance Committee made unnecessary the institution of many such suits against lawyers by aggrieved clients? Has the Committee afforded a fair and inexpensive forum for the aggrieved client to have his grievance justly considered? Has not that Committee done much to elevate the standard of professional honor and save the weak and erring by timely warning from falling from the height of recognized professional responsibility to the depths of professional degradation?

Similar work is done by other bar associations throughout the state.

Is there any food for thought by the medical profession in what the legal profession has thus done and is continuing to do?

#### GIVE YOURSELF A TREAT.

Those members who live in the northern part of the state, and those from the southern section who happen to be in New York on business or pleasure bent during the next 2 weeks, should

make a point of visiting the Winter Exhibition of the National Academy of Design, 215 West 57th Street—open until December 19 between the hours of 10 a. m. and 6 p. m.; Sundays 1:30 to 6 p. m.

This year's exhibition is by far the best held for a number of years, and if you have any interest whatsoever in art as exemplified by paintings and sculpture, you will be well repaid for an hour or two devoted to observation of the many excellent pieces displayed at this salon. There is a striking absence of the bizarre and freakish paintings so common at many art exhibitions of recent years.

One can scarcely mention pieces of exceptional merit without risking invidious comparisons, and we have not sufficient space left in this issue to enter into detailed descriptions. We may, however, call your attention to the large number of excellent portraits and a series of remarkable pieces of sculpture. Among the especially noteworthy exhibits are:

Portraits—"Murray Marvin", by Wm. J. Baer. "Marjorie Daingerfield", by Rittenberg. "Mrs. Trask", by Whittemore. "Blue and White", by Neilson. "Mrs. Sheppard", by Jean Mac Lane. "Black, White and Gold", by Leslie Thompson. "Romanza", by Francis Day.

Landscapes, Etc.—"Sisyphus", by Will Low. "Passing Showers", by Geo. Inness, Jr. "The Sail Maker", by Frederick Wright. "Moonlight in Normandy", by A. P. Lucas. Autumn Decoration", by Vaillant. "A Pueblo Indian Fireside", by Couse. "A Discussion", by Uffer. "The Shining Brook", by Palmer.

Nudes—"Morning" and "Slumber", by Andre; one by Sidney Dickinson, and one by Harry Farlow.

Sculpture—Among these you will wish particularly to see: "The Awakening", "The Dance", "As I Saw Her", "La Joie", and "Melting Snow"—all works of rare excellence.

#### QUARANTINE.

Doctor comes in and pulls a face  
Nurse arrives in quiet grace  
Head of house set at a pace—

Quarantine.

Days go by in silent rush  
Work goes on with many a hush  
No time now to weep or gush—

Quarantine.

Life is such a paltry mess  
Home made up of nothingness  
Naught all day to do but rest—

Quarantine.

Mail comes in but none goes out,  
Folks pass by, but sure keep out  
We're in an awful world of doubt—

Quarantine.

'Phone rings up, Oh friends are dear,  
Not by sight, but just by ear,  
Oh, it does all seem so queer—

Quarantine.

When this cruel time is o'er,  
We'll beat it for another shore,  
And won't come back here any more—

Quarantine.  
—Hannah Bennett.











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